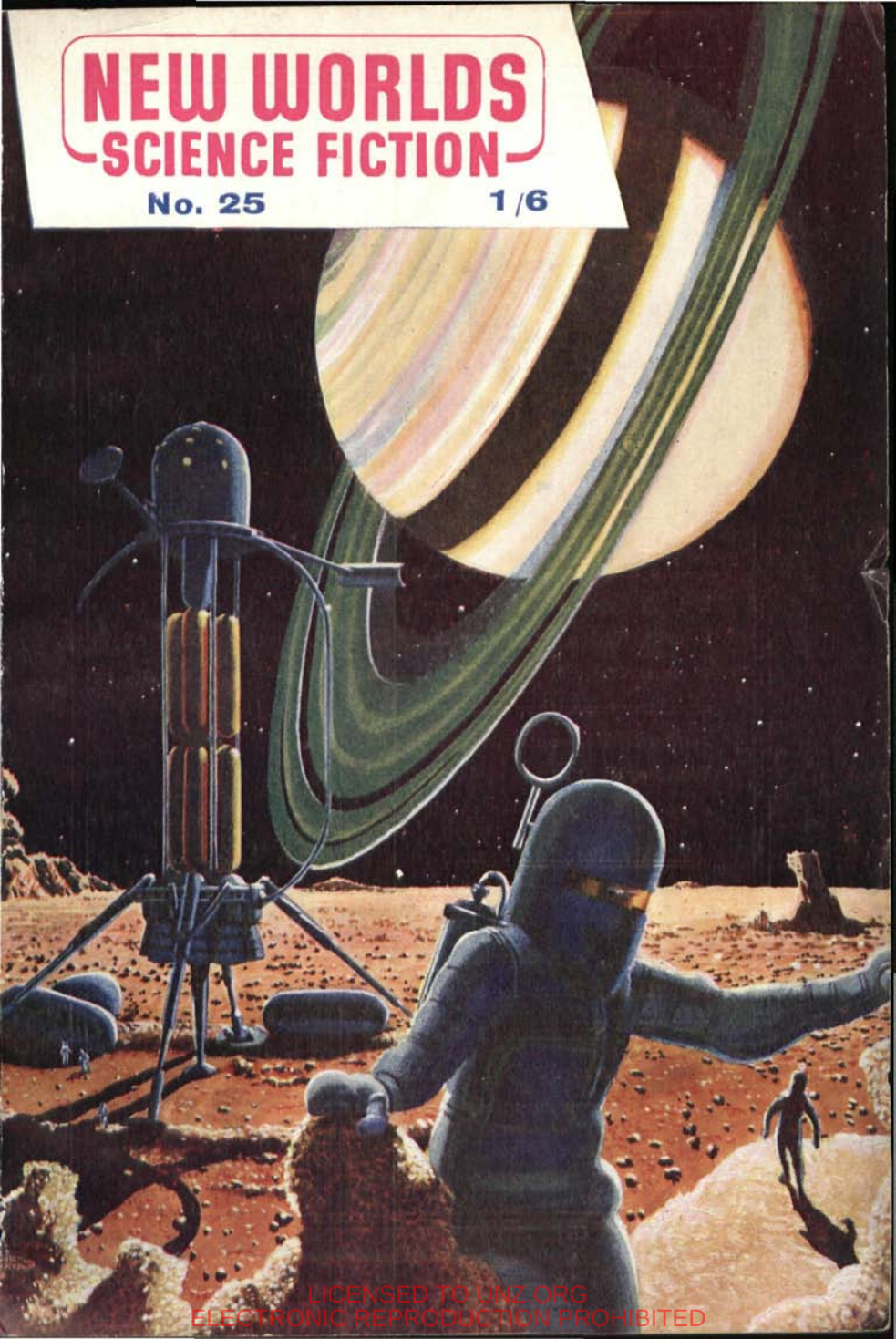
# NEW WORLDS SCIENCE FICTION

No. 25 1/6



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# Peter Hawkins

One of the most interesting facts about most of our British writers is that they first became interested in science fiction literature during the formative years of their lives. Peter Hawkins is no exception. Born in 1926, he discovered the medium almost as soon as he could read and obtained endless pleasure from the works of Wells and Burroughs, later finding the few magazines devoted solely to this specialised field.

His livelihood is earned in the London office of an Australian Bank, but his spare time is spent evenly between writing science fiction (he has had five stories published), and listening to good music — during the recent war he was responsible for many music programmes radioed from a Service station in Palestine.

He believes that he will see a spaceship land on the Moon and return safely to Earth during his lifetime.

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# NEW WORLDS SCIENCE FICTION

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# What makes a Successful Convention ?

As I write this the bells of the Cathedral in Manchester are pealing a carillon on the closing scenes of the second day of Britain's annual science fiction Convention. Typical of this locality in the heart of the industrial area rain is gently falling making concentric circles on the dark muddy water of the River Irwell flowing outside my window, but weather traditions were broken yesterday when Manchester put on a beautiful warm sunny day for the opening sessions at the Grosvenor Hotel in the City centre while the rest of the country was deluged with heavy thunderstorms.

With the Convention almost over I can already predict that this first major gathering to be held outside London since 1937 has been an overwhelming social success, far greater than any yet held. The reason is very obvious—the Convention Committee reserved adequate accommodation right in the Convention hotel for out-of-town visitors and at the end of each day's formal programme conventioneers are able to roam the quaint confines of this rambling building (where even the porters are not sure where rooms are situated), seeking friends and celebrities to discuss in general still further aspects of fantasy fiction.

The success of each year's American convention has been based largely upon the social privileges enjoyed rather than the more serious nature of the official programme, illuminating and entertaining though it can be. For the first time in Britain the Manchester Committee, ably headed by secretary David Cohen and treasurer Brian Varley, have copied the American pattern and found the answer to the question heading this editorial.

The formal programmes each day have been a miscellany of items ranging from discussions on radio-activity, magazine art work and the desirability or otherwise of British reprint editions of American magazines, to humourous sketches and recordings with a fantasy flavour, discussions by authors John Russell Fearn, E. C. Tubb, James White, John Brunner, and others, an amateur play, and a film showing of that old but still popular Wells' epic "Things To Come."

While this side of the Convention has been very well done (despite programme changes enforced by speakers being unavailable at times required—a problem which has never been overcome either in this

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country or America), and the 160 or more visitors constantly entertained, far greater constructive criticism has been put to the professional authors, editors and publishers (and amateurs, also), during the sessions held at night.

Most memorable party of the many progressing last night was one put on by members of the Liverpool science fiction group at which there were not only representatives from practically every amateur organisation in the country but professional men whose names are quite well-known to our general readership—authors E. C. Tubb, Alan Barclay, Ken Bulmer and E. R. James were in earnest discussion with our newest and youngest find in the fantasy field John Ashcroft. James White received a warm accolade for his outstanding story " The Conspirators " published in our last issue. Contemporary editors Alistair Patterson and Peter Hamilton were involved in a lengthy discussion with a group which included former editor Walter Gillings, Sydney Bounds, John Brunner, David Gardner and outstanding humourist Walter Willis from Belfast who was responsible for writing the script of the most successful play of the Convention.

The significant point arising from the Liverpool party is the fact that fans and readers of science fiction apparently neither die or fade away—at least four pre-war readers present attended Britain's first Convention held in Leeds in 1937. Their interest is still as keen today as it was seventeen years ago but the circle of friendships made in this field has widened beyond knowledge.

Before the final curtain rings down on this great holiday get-together, however, I have experienced what can only be termed the strangest and most inexplicable coincidence of a life which has been more than full of such happenings. During the morning, quite by chance, a Canadian booked into the hotel for a one day stay while en route to the Continent. As he checked into the room right opposite to my own a chance remark about science fiction revealed that he was our own Canadian writer Gene Lees author of " Stranger From Space " in a recent issue of *Science Fantasy*. Far from being a feminine writer as I announced in that issue, Gene turned out to be a good-looking Canadian-born male of British parents who is a feature writer for the *Montreal Star* newspaper passing through this country to cover a special feature on the Canadian Army in Europe. He had flown to England and, having a day or two to spare had visited Manchester to look up an ex-Canadian musician friend.

The magnitude of coincidence for such a meeting is too infinite to think about, but Conventions seem to work that way. I am already looking forward to next year's.

*John Carnell*

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*Accidents are going to happen in space when interplanetary travel becomes a fact. The most important people on ship, space station or extraterrestrial base will be the doctors—and they will have to discover new methods of treatment under very unearthly conditions.*

# STARVATION ORBIT

## By James White

Illustrated by QUINN

Russell moved towards the damaged section of the Station, sliding his foot magnets slowly over the buckled areas of the hull, lifting them carefully when twisted, jagged-edged metal threatened the fabric of his spacesuit.

What a mess, he thought, as he avoided a tangle of wreckage that had once been the water reclamation plant, what a rotten *mess*. For the first time in the short history of space travel, a ship had collided with a space-station. He hadn't realised until now just how lightly-constructed the stations were. Balloons strengthened with cobwebs, that's all they were. Lucky thing the ship had merely gouged a piece out of the rim.

He added another layer to the glare shield on his helmet. The blinding white expanse of Venus' eternal cloud blanket filled half the sky, and it was beginning to hurt his eyes. There was no shortage of light out here. If there was anything to find, he could hardly miss seeing it.

Russell didn't really expect to find anybody alive. It seemed an impossibility. But the Station people said there was a chance, a slim chance, that if the men in the rim had time to get into their spacesuits before the crash, and if the crash hadn't made mince-meat of them, then there might still be a few of them alive. Naturally, if there was any chance at all, he'd have to search until he was absolutely sure one way or the other.

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He looked once to either side to see if the two men helping with the search had had any better luck than himself. Apparently they hadn't. He was almost at the rim now. Most of the hull plating hereabouts had been ripped away, which made it harder to move around. He wished he'd been able to become a little more proficient at handling himself in a spacesuit,

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but as Medical Officer of the North Polar Base on Venus his trips up to the Station had been confined to short routine visits of only a few hours each, so there had never been much time to practise.

A voice in his headphones, toneless and metallic, brought him up sharply.

"Doctor! Over here."

The man on his right was waving his arms slowly above his head. Russell moved over to him as quickly as he could, then he saw what the other had found.

The man had been trying to get into his suit when the smash had come, but had only managed to cover one leg before being exposed to space. For yards around him the wreckage was coated with a reddish-brown stain, like rust. But it wasn't rust. When subject to explosive decompression in space, the human body looses all its fluid and gaseous contents in a matter of seconds. There is a surprising amount of blood in people.

Russell bent forward. He had to look for some identification on the body, a very messy job. But before he could begin, the man who had found it spoke again.

"Don't bother, Doc. It's Murray. I recognise the pyjamas. . . ." His voice choked into silence for a moment, then, with awful intensity, he said softly, "Oh, *blast* that ship."

The doctor knew how he felt. He followed the other's furious stare out to where the six-hundred foot winged dart that was the *Queen of Darkness* tumbled end over end less than a mile away. The ship seemed to be in an even worse predicament than was the Station, for when the *Queen* hit the rim and caroomed off, she had absorbed the not inconsiderable amount of kinetic energy possessed by the rotating spacestation. Now the station no longer rotated, but the ship spun and twisted and rolled wildly with a motion that made Russell's stomach feel uneasy just by looking at it.

But the ship was gradually being brought under control. Somebody aboard was doing a brilliant series of permutations with the steering jets; it would be only a matter of time before the ship was completely at rest, then it would be needing help, too. He felt sorry for the crew. Unless they had all been strapped in, they must have taken an even worse beating than the men on the Station.

Russell looked away from the madly-spinning ship and said quietly, "Take it easy. We don't know what happened exactly. Maybe it wasn't their fault."

The other just grunted and turned to renew the search.

The doctor was about to do the same when the voice of the third member of the party came crackling out of his 'phones. He had found something, too. They both hurried over to join him.

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Russell saw immediately that this one had been lucky, he'd had time to don his suit and seal it properly. Also, he must have been knocked out at once, for the spacesuit had starfished from the internal air pressure, and that couldn't have happened if the man had had conscious control over his arm and leg muscles. He floated motionless, a few feet out from the rim, with one foot caught in a tangled strand of electrical cable. The cable, which was less than an eighth of an inch thick, had kept him from drifting off into space. The doctor couldn't see the man's face very well through the helmet, but there was a purplish tinge in it that he didn't like at all. It dawned on him suddenly that the suit's air tank must be practically exhausted. The poor fellow must be smothering in there. He said sharply to the men beside him, "Quick. I think his air has run out. Pull him in."

Russell had a spare oxygen tank ready when they got him back onto the hull. He changed that first, then plugged his transmitter lead into the injured man's helmet and said distinctly, "Can you hear me?" No answer. He reached forward quickly to increase the volume of the other's receiver. His elbow barely touched one of the loosely outflung arms, and a low, shuddering moan came through his 'phones, but the man didn't come to. Russell cursed himself for a clumsy, bungling fool. That arm was probably fractured somewhere—people always stuck their arms out to save themselves in a smash—and he was making it worse by man-handling it about like a sack of potatoes. Very carefully he lifted the man by his wide metal belt so as not to touch the arms and legs, and retraced his steps to the station's central airlock.

He had just anchored the unconscious man to the hull beside the lock with a magnet when the voices of the other two searchers came, almost simultaneously, over his 'phones.

"Doctor. I've found another one."

"I can see two over here, Doc. But we're going to have trouble getting them out, better bring the cutting torch when you're coming."

Dr. Russell brought a crowbar and some rope as well as the cutting torch. He'd an idea they'd need everything. He was right.

Half an hour later, as he stood in the airlock with the four still figures of the men they'd been able to rescue lying at his feet, he marvelled anew at the nearly limitless capacity of the human body for taking punishment. Of the seven men who had been in the wreckage, these four had been able to get their suits sealed in time. There was no way of telling how badly they were hurt until he had them inside in the air, but it was a miracle that they were alive at all. He shook his head, then began to loosen his helmet as air whooshed into the lock and the inner seal opened.

One of the station crew, his head and hands swathed in bandages, moved forward to help him. The bandages wrinkled a little where the

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man's mouth was as he mumbled painfully, " I'll give you a hand, Doc."

Russell looked at the bandaged hands, then up at the pale grey eyes that peered at him through ragged slits in the gauze covering his face. This must be the chemist—the one who had taken the header into the benchful of glassware. When the doctor left for outside, Robinson had been treating him. Surely he shouldn't be wandering about like this.

" It's all right. I can manage," he said quickly as the other bent over one of the injured men, " But you could go tell Dr. Robinson to come here as quickly as possible with the hypos. She'll know what you mean. And," Russell ended sternly, " you take it easy, chum. If there was any gravity here we'd have you flat on your back in bed. Go anchor yourself in some warm spot and rest, or you'll be needing a blood transfusion."

Without answering, the man kicked strongly with both feet and went sailing off down the corridor. He did a beautiful somersault and landed squarely at an intersection. Before he disappeared in the direction of the sick bay to deliver the message, he called back softly, " Look, Doc. No hands."

The show-off, thought Russell, and wondered at the strange quirk in human beings that made it well nigh impossible for them to take good advice. He turned and began removing the helmets of the injured men and cutting away the clothing around their necks. His assistant would be along in a minute and he didn't want to waste time.

The sting of the needle going into the fleshy part at the side of his neck brought one of the men to momentarily. He clenched his teeth, then began to relax as the contents of the hypo took hold. His eyes focussed on Robinson's flaming thatch above him. In a weak, bemused sort of voice he murmured, " What d'you know, a beautiful nurse," and passed out.

The beautiful nurse, or doctor to be exact, inclined her head and said, " Well, *thank* you." Then she moved to the next man.

" Have you got enough? " Russell asked. He was referring to the shots which were being injected to counteract shock and deaden the pain of the fractured limbs prior to the men's spacesuits being removed. They couldn't, of course, peel off the tight-fitting metal and plastic suits while the men were conscious. That would have been one of the most hellish tortures imaginable, so they had to anaesthetize the patient first. Then, while stripping off the suit they had to be as careful as possible not to compound or complicate any of the injuries he had suffered. That was the worst part, Russell knew. No matter how careful they were, they could never be completely sure that they weren't increasing the damage.

Robinson answered, " Yes, but we're running short," she stopped talking to attend to the last man, then went on, " There's enough for about eight more shots, but nearly all the people we treated first will need

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renewals. They were badly knocked about, you know." She sounded worried.

Russell did know, only too well. When Robinson and himself had been whisked up to the station from the colony at the North Pole of Venus in answer to a panicky call for help, they'd found a shambles. The crash, reducing as it did the four revolutions per minute rotation of the Station to complete immobility in the space of a few seconds, had flung the personnel against walls and bulkheads with bone-shattering violence. A few were lucky. They'd been in the central weightless section, waiting to begin unloading the approaching *Queen of Darkness*, so the abrupt halting of the station's spin hadn't hurt them. But with the others it was another matter entirely. Every single one of them was a fracture case.

It would have been much worse, the doctor knew, if the runaway *Queen of Darkness* hadn't given a few minutes warning of the impending smash. But the radio operator on the ship had yelled something about their A-Drive being on the blink and for everybody on the station to get in their suits quick. Davenport, the station radioman, had thrown the Multiple Puncture Alarm switch and hastily taken the other's advice. Then, when the crash left him drifting weightless above his transmitter with a broken arm and his shoulder out of joint, he had called for help until his antenna was carried away by the shifting of loose wreckage.

The suits had given a measure of protection to the men, even though they were of the lightweight, emergency type that hung about the station in much the same way as lifebelts on an ocean-going liner. Most of the bodily damage was confined to bruises and breaks. Mostly breaks. Russell winced a little as he thought about some of them.

If they'd only known what to expect, Robinson and himself would have come better prepared. The one and only colony at the north pole of Venus was small as yet, but it was very well equipped with regard to the medical end. They could have taken the complete fittings of a small hospital up with them providing said fittings could be got into the ferry rocket. But instead of knowing what to bring, they had had to guess at what would be needed. Their guessing had been pretty close to the mark, but it hadn't been quite good enough. Necessary supplies were running very short, and anaesthetics were high on the list.

As they manoeuvred the unconscious men along the corridor and into the dining hall which housed the most seriously injured personnel, Russell asked, " Anything come up while I was outside? "

She shook her head. " Nothing, except that McBride came to, and wouldn't let me put him over again until he'd talked to some of his crew. After he'd talked to them he wouldn't let me put him over at all. He wanted to go on a tour of inspection. . . ."

Russell said faintly, " Oh, no."

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"Oh, yes. And," she went on, "when I put my foot down and told him that with two broken legs he wasn't going anywhere, I thought he was going to spit in my eye. What a temper that man has." She shuddered expressively at the memory of it. "Now he has the men who were in the no-weight section and escaped injury climbing about all over the place in spacesuits trying to assess the damage, and the walking, or should I say *flying* wounded, dashing about doing McBride only knows what.

"A few minutes before you came back I went in to see how he was doing. There were six other men in the room and they were all talking a blue streak. When I went in they all shut up and wouldn't say a word until I'd left. I don't get it at all." She paused, then stated quietly, "Something is happening, or has happened, that they don't want us to know about. I wonder what it is."

Russell was curious, too. Something must be going on, he knew, because Robinson wasn't given to exaggeration, but he couldn't spare the time to wonder about it just now. He told her to get the stuff ready, and they began the slow, nerve-wracking job of removing the spacesuits from the unconscious men.

They didn't talk much. There was no need to. Robinson was the best assistant Russell had yet found. Sometimes he suspected her of being telepathic. She was what every doctor prayed for. An extra pair of hands directed by a single brain, his. He was going to miss her terribly when her three-year spell at Venus colony was finished.

Two of the men, splinted and bandaged, were floating a few inches above their tables, and they were working on a third when a scraping, metallic clanking sound reverberated along the corridor and the whole station lurched slightly. The patients, suspended in various positions about the room, bobbed gently and became still again. Russell looked up anxiously, but when the bump wasn't repeated, they went on with their work.

Their concentration was so intense that the noise of the main airlock being opened followed by the sound of voices, raised in anger and bitter recrimination, failed to distract them.

Russell was finishing with the last case, and Robinson was swooping about the room trying to round up a widely-dispersed shoal of loose dressings and bandages, when a low voice speaking from the doorway enquired, "Doctor Russell?"

The doctor looked up and nodded. He saw two men, both wearing spacesuits with the helmets thrown back, floating just inside the door. The speaker, a tall, thin-faced man with sandy hair, seemed to have escaped injury completely. His companion had been less lucky. His right arm was strapped tightly to his side with several strands of electrical cable, and a great, livid bruise made a technicoloured mess of his face from

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temple to jaw. The jaw was obviously broken, because his mouth hung open and he didn't seem able to close it. Russell wondered why he hadn't reported himself for treatment long ago. The first man spoke again and he knew the reason.

" This is Captain Allerton, of the *Queen of Darkness*. I'm Winthrop, the ship's radioman." He spoke defensively, as though the mere words of identification would make the doctor start throwing things. Russell made no comment and he went on, " We've had casualties. Some of them are in a very bad way. I wonder if you'd come and have a look at them, Doctor. I don't want to risk moving anybody until I'm sure of what's wrong."

Russell looked at the Captain. So this was the villain. The man responsible for the smash, if what the Station men said was true. His eyes, though open, had a glazed, unfocussed look. He was out on his feet. The doctor brought his attention from the Captain to ask Winthrop for details about the ship's injured.

When the radioman had finished his tale of carnage and destruction, Robinson, who by this time had joined them, said briskly, " I'll go, Doctor. You've been outside enough for one day. I'll get my suit."

" But——" Winthrop began a protest. Russell silenced it by telling him that Doctor——he stressed the ' Doctor ' slightly——Robinson was every bit as good at the job as he was himself. And hadn't he better bring the Captain the rest of the way in and have his arm and face seen to?

" Maybe Mister Winthrop is old-fashioned, or doesn't believe in lady doctors," Robinson put in as she gently eased the Captain towards an empty table. She sighed and fluttered her eyelashes like the poor, weak, ineffectual woman that she most decidedly was not, but became serious again and said, " Give me ten minutes to get ready, then you can take me out to the ship."

" Sorry," said Winthrop, his face going slightly red. This was his first trip to Venus, and nobody had told him about the glamorous half of the Medical Section there. He continued, " I'll come back for you in a few minutes, if you don't mind. I've got to see the Station Chief right away. Does anybody know where Mr. McBride is? "

Russell indicated the direction with a nod of his head and said, " Next door." Winthrop left. Robinson began the series of mid-air acrobatics necessary for the donning of a spacesuit in the weightless condition. The *Queen's* radioman returned as she finished. They both left quickly for the airlock carrying sealed cannisters of drugs and instruments. The doctor continued working over the Captain.

Allerton wasn't in very bad shape apart from a simple fracture of the humerus and another of the inferior maxilla. The arm injury would keep

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him from writing love letters and the broken jaw would stop him from talking for a while, otherwise he was good as new. But Russell decided to keep him under observation for a few days just in case, because the Captain and himself had had quite a wrestling match before Allerton would submit to the injection of the anaesthetic. He had struggled like mad, and all the time making pitiful mumbling sounds through his messed-up mouth. The doctor shook his head in perplexity. Anybody would have thought he was being killed instead of put to sleep.

Russell sighed and gave a sudden yawn that threatened to dislocate his own jaw, then he shook himself and rubbed his eyes. It was time he made another round of his patients.

The dining hall and the two storage compartments adjoining it had contained seventeen of the casualties. The number had now shrunk to eight. These were the serious cases who had been drugged to prevent them from compounding their injuries by involuntary movement. Presumably, the others were out running errands for McBride. The doctor felt anger at the Station Chief's callousness mounting as his check-up of the unconscious men proceeded. McBride shouldn't have asked the men in sick bay to do anything. They were supposed to rest until the *Queen of Darkness* was ready to take them down to the colony hospital ——the tidying and patching up of the Station could wait until a fit crew from Luna arrived. In this absence of gravity those men could have some nasty accidents. He'd go and speak to McBride about it, as well as a few other things he had on his mind as well.

On the way to McBride's room two of his missing patients passed him without stopping. In fact, they hardly even noticed him. They were talking technicalities in low, worried tones, and they looked, Russell thought, as if all the cares of three worlds and a fair-sized moon had fallen on their not particularly broad shoulders. He began to wonder uneasily just how bad things were here. Nobody had thought of telling him.

There was a lot of shouting coming from McBride's room. Two men seemed to be doing most of it. He recognised the Station Chemist's voice because it sounded as though it was coming through a wet towel. He didn't know who the other belonged to. As he reached the door, a roar from McBride drowned both of them out. "Stop that!" he shouted, "I don't care who was responsible for the crash." Then, cutting down the volume slightly he went on, "That can wait. What we want to know now is how . . ." He broke off as he saw Russell in the doorway. ". . . . Yes, Doctor?"

The Station Chief floated above a small table to which a large plan of the station had been fastened by three pieces of sticking plaster. He'd been pointing at something on it when the doctor had entered. With both his legs splinted and bandaged together he looked just like a dragon-

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fly, Russell thought. But the sight wasn't one to cause amusement. At opposite sides of the table Winthrop and the chemist were trying to murder each other with their eyes. As if nothing was happening, Russell spoke.

"It's about the men in the dining hall——what's left of them," he couldn't help adding. McBride had no right at all to set injured men to work without first checking with him. He went on, "I need further supplies of special splints and anaesthetics urgently, also other items which I can list for you. Those men have to be kept under until we can get them down to the Colony, but a few of them are due to wake up any time now and there isn't enough dope to put them over again. The splints are needed to replace the make-shift ones we've been using up to now, which have been all right in weightless conditions, but which might not hold up during deceleration and landing. Practically all the men will need them, so the sooner I get some, the quicker we can evacuate this place." He stopped and grabbed at a wall net to keep from drifting into Winthrop then finished, "Will you send the ferry down for them as soon as possible?"

While he had been talking the three men had never taken their eyes off him, and the expressions on the two faces that he could see defied analysis. When he had finished, the chemist shook his head dumbly. Winthrop opened his mouth to say something, but McBride silenced him with a look. Russell felt embarrassed and a bit uneasy. He was beginning to think a psychologist was needed up here as well as an M.D.

After a silence of nearly half a minute, McBride cleared his throat and said, "I'd rather not do that just yet. The fuel, for one thing——"

Russell rarely lost his temper. He didn't completely lose it then, but he said some very unkind things about people who hummed and hawwed about using a measly twenty tons of fuel at a time like this. McBride started to interrupt but the doctor talked him down. He pointed out that he was well aware that fuel was the most expensive item in space flight, but that this surely was a special case. Speaking in short, simple sentences he painted a vivid word-picture of what it would be like in the dining hall when the anaesthetic wore off. Men with nearly as many fractures as they had bones, inadequately treated, and forced to remain conscious. As a simile he mentioned the cockpit of one of the old-time ships of the line.

Perhaps he dramatised things a little, but he couldn't help it. Russell always felt strongly for his patients, he was built that way. Some doctors become hardened to human suffering, he knew, and develop a detached, objective approach to it, but he had never been able to do that. He often wished that he could look on every patient as just another case——it would be a good deal less wearing to himself. So now he was pouring it

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on thick to McBride. And the Station Chief, his face expressionless, was waiting for him to run down.

Finally Russell ended on a questioning note.

". . . . And why is everybody being so secretive about something? Both Robinson and I have noticed it. I've been too busy to really look around this place. What exactly happened? Just how bad is it? And," he ended sharply, " what is going on that you don't want me to know about? "

McBride exchanged glances with the men beside him. They both nodded slightly. The Station Chief came to a decision, sighed, and spoke.

" I'll take your questions in order," he said in a level voice. He didn't seem a bit angry. " First. I am not worrying about the economics of the situation. The fuel has got to be saved, not because it is expensive, but because it is in rather short supply at the moment——"

" Short supply! " The Station Chemist exclaimed incredulously. He laughed, completely without humour, and said something else which was muffled by his bandages. McBride ignored him.

"——We didn't want to tell you this because you had enough to occupy your mind already. Also, we didn't want to give rise to unnecessary anxiety until we were absolutely sure of our position. But I see no reason for holding back the information now. As simply as possible, this is what happened.

" When the *Queen* hit us she was carrying, in containers attached to her outer hull, enough fuel to replenish the station's storage tanks which were empty at the time. As the fuel is manufactured and loaded at Luna base, and as there is no air resistance in space, this is the customary method of transporting large quantities of fuel in a relatively small ship. The collision ruptured the greater number of these containers and the fuel was lost. The rest broke free and were flung away when the ship was knocked into a spin. A wing of the ship ripped a hole in the station's main food storage compartment, and most of that was lost, too. The air regeneration plant suffered as well."

As he paused in his catalogue of the destruction, Russell dropped his eyes and reddened in embarrassment. He shouldn't have gone off half cocked the way he had just now. He felt an awful fool.

McBride continued, " The only fuel available at the moment is the small emergency supply carried by the *Queen*. This is far from enough to enable the ship to land on Venus. However, if we transfer it to the ferry rocket, the smaller ship will have sufficient to make two trips down to the colony and return. You can now see why I want to save fuel."

" I'm sorry. I thought . . . "

McBride waved the apology aside, " No matter," he said, " it was a natural mistake under the circumstances. But you have convinced me that a trip is necessary to obtain the supplies you need. I'll send the ferry

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down, and use the opportunity to evacuate some of the men. The ship will take three people as well as the pilot. I suggest you pick out three of the wounded who are bad enough to require urgent hospitalization, but not so serious that the deceleration will fatally complicate their injuries, and arrange for their transfer to the ferry.

" I'd like you to be as quick about it as you can, Doctor."

He stopped talking. In a very polite and well-mannered way Russell had been given his orders. The doctor nodded dumbly. He was still trying to grasp the implications of the information he'd just been given. He turned to go, but halted himself at the doorway as the other called, " Er, Doctor. I forgot to mention it. From now until further notice, smoking and any other wasteful form of combustion is strictly forbidden, and the food and water will be rationed. You will get the details shortly from Bradley——he's in charge of distribution. That's all."

He turned and began talking to Winthrop about the possibility of picking up some of the scattered fuel tanks on the radar screens and sending men out after them in gas-propelled spacesuits. Apparently he'd forgotten Russell's existence.

The doctor continued to the dining hall, his mind in a whirl. Food rationing? Saving air? Just how long, he wondered, was McBride expecting to stay here.

Robinson had come back from the ship and was telling five Station men who each had a limp crewman in tow, where to put them. When the men had gone she indicated the latest arrivals and said, " They're wearing heavy duty suits, the type that comes apart in three pieces. We shouldn't have much trouble getting them out." She stopped and looked closely at Russell. " You look sort of . . . Is there anything wrong? "

Russell began stripping the suit off one of the ship's men. As he worked he gave Robinson a rapid summary of the position as had been revealed to him by the Station Chief, including the part about the evacuation of three of the wounded. He waited to see how she'd take it.

" I'd an idea something like that would happen," she said quietly. " I heard somebody talking about it at the airlock, but I didn't think it was as bad as that." The prospect of an extended stay on short rations in the Station didn't seem to worry her at all. They worked for a long time in silence until she said thoughtfully, " I suppose Browning, with his depressed fracture of the skull, will go? " Russell nodded. She continued, " And Whatzizname over there in the corner . . ." She broke off, ". . . . Oh, I wish I'd known this was going to happen. I could've packed an overnight bag or something."

Russell laughed in spite of himself, but sobered quickly and said, " You finish this lot. McBride wants the men transferred to the ferry

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rocket as soon as possible, so I'd better get cracking on it. We can decide who the third man will be while Browning and," he grinned slightly, "Whatzizname are being prepared."

"That man who was in the *Queen's* airlock when she hit, he should go, too, I think," she said seriously. "But putting him into a suit again for the changeover would probably kill him. He's in a bad way."

"We don't have to worry about that," Russell reassured her. "When I was outside some of the men were getting ready to connect both ships directly to the station with spacetubes. By the time the men are ready, spacesuits will be unnecessary. But what I am worried about is plaster and splints. Those men should be in a cast from toes to chin. That ferry can make some very bumpy landings. . . ." He trailed off into silence.

"They've got some stuff on the ship that you could use," Robinson said suddenly. "Insulation or something for the colony power-station, they said it was. They've several drums of it. It's very messy, like tar," she made a faint grimace. "One of the drums burst open so I know all about it. The stuff has a very low melting point, and it dries out as hard as rock in about fifteen minutes, they said."

"That should do the job, I think," Russell agreed. "We can try it, anyway. I'll send to the ship for some."

One of the three station men who were rigging the fuel transfer line from the *Queen* brought a drum of it to the dining hall for them. Thoughtfully, he'd brought a lighted blow-torch along as well. While the stuff was thawing out, the doctor began attacking various items of the room's furniture with a view to converting them into splints. He'd had lots of practice at that particular job recently so it didn't take very long. Then came the tricky business of applying the stuff.

It was the stickiest, messiest, most evil-smelling goo the doctor had ever known, but it did the job. The station man played the torch over the drum, keeping it warm enough to be an easily handled porridge-like fluid, but not so hot that it would bubble out of the container and float about the room. But even so, the place soon looked like the photographic negative of a snowstorm. Russell lifted great, two-handed dollops of the stuff and slapped and patted it into position over clothing and bandages and splints with little regard for the trouble he was making for the people who would later want to take it off. Speed was the important thing at the moment.

When he had finished he drew back a little and looked at the result. He thought, with a feeling of awe, that they resembled nothing so much as a trio of the Undead. Certainly they were the most unhygienic medical cases he'd ever seen. Poe, he thought, could have done a good job of describing them, but he couldn't.

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Robinson, who had finished with her cases, was making dirty cracks about witch-doctors and zombies when the Station Chief, in person, arrived to say that the ferry was ready to go. They began pushing the injured men out of the room and towards the Number Two airlock, which was now connected to the ferry by a spacetube. As the tarry stuff wasn't quite dry, there were some very disparaging remarks made about it by

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the Station man and Robinson. It was the first time they'd met it hand to hand. McBride, who was directing operations from the rear, seemed to think there was an element of humour in the situation. It was the first time Russell had ever seen him smile.

Later, after they had watched the ferry rocket, from a port in the dining hall, drop from sight towards the dazzling cloud blanket of Venus, Russell wondered how he was going to get the tar off his hands when the water was about to be rationed. Robinson suggested alcohol, but before he could try it there was an interruption. Bradley, the Station Meteorologist, and now acting Food Minister, glided into the room towing a net bag.

"Tea up!" he announced with a sickening show of joviality, then amended himself hastily, "Actually it's water." From the bag he produced two narrow-necked bottles and two cans labelled 'Baked Beans' and 'Stewed Carrots' respectively and gave the lot to Russell with instructions to divide with Robinson fifty-fifty. Russell thanked him insincerely and remarked that if this was their tea, they were going to be well fed indeed. Bradley pointed out that 'tea' was only a figure of speech. They would get nothing more until Wednesday lunch-time, and that this, if anybody was interested, was Tuesday afternoon. He advised them strongly not to over-eat, laughed heartily, and left.

"Him I'd love to strangle," Robinson murmured with great feeling. She sucked daintily at the water bottle.

Russell sighed in resignation. "Oh, well. We've at least got a choice. Do you want beans or carrots?" He hated both.

The doctor didn't mention it, but when Bradley had given him the rations, he had seen the unmistakable outline of a heavy revolver inside the other's shirt. Russell supposed it was there in case someone insisted on a second helping.

They existed on beans and carrots for five days, then the menu was switched to rhubarb and black chocolate. The vegetables weren't Earth grown, Russell knew, but had been produced on Luna in hydroponic tanks. They were incredibly rich in vitamins and things, but nobody had ever been able to adequately describe their taste——not in mixed company, anyway. The chocolate was standard emergency rations. One could cultivate a taste for it if one was starving. The doctor was starving. Everybody was.

But Russell was better off than the others. He bore that shameful stigma of the middle-aged, a well-developed spare tyre, so while the lean and hungry types grew ever leaner and hungrier, he was able to live off his fatty reserves. The ferry had returned with his needed supplies. His patients were progressing satisfactorily, all things considered. So all there was left to do was to wait until somebody either came and took them off

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the Station, or they thought of a way of getting down to the colony themselves.

One patient still caused him considerable unease, and that was the Captain. Allerton, though he was in no physical danger from his injuries, seemed to go into near hysteria every time he came out of the anaesthetic.

Once, when Winthrop and the doctor were beside him talking about the smash, he had nearly wrecked the place. Russell had to hang onto his legs to keep him from kicking himself across the room and into the other patients. All the while he kept waving and gesticulating with his good hand under the startled Winthrop's nose. He couldn't talk, of course, but he tried to so hard that his eyes bulged. The doctor had wished fervently for the umpteenth time that he had him in a proper hospital, for the treatments he was forced to use up here were, besides being the crudest of makeshifts, about fifty years out of date. It was Russell's belief that the collision had unhinged the Captain. He was certain of it after Winthrop told him what had happened on the *Queen of Darkness*.

Allerton had been making the customary gentle approach to the Station on the steering jets. Suddenly, for no apparent reason, the A-Drive let loose with a full five G's. Luckily, it lasted for less than a second, but it was enough to lay the crew, who had all unstrapped themselves in readiness for unloading, out cold. Winthrop, who hadn't unstrapped, had eyes only for the spot of light that was the Station dead-centring his radar screen, and growing larger and brighter every second. He yelled a crash warning to the Station operator, closed his own helmet, and just waited for it.

The crash nearly shook him apart, but it was the others who suffered most. The complicated spin on the ship made them flop and bounce all over the place. Winthrop, after an unknown period of time, had somehow managed to crawl around to the Captain, who was jammed face down onto an instrument panel, and succeeded in strapping him to his seat and bringing him round. He had done this by placing his mouth against the Captain's ear and shouting at the top of his voice.

Then Allerton, with only one good hand, had fought the spin on the ship until he'd killed it completely. Winthrop didn't know how long it took, it felt like days. Several times the Captain passed out, and had to be revived again. Winthrop had to be pretty brutal about it, because the noises the injured crew were making was nearly driving him nuts.

Finally, when the battered *Queen* had bumped gently alongside the station, Winthrop had tied up the Captain's arm and towed him across to the doctor.

After an experience like that, Russell thought, a man had an excuse for irrational behaviour.

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There was one thing the doctor had never considered seriously in the beginning, and that was the transport problem. But, after a few sessions with Winthrop and McBride, he suffered a drastic change of mind.

Winthrop and the Station Chief came often to the dining hall. McBride to play chess with the doctor and to ask after the wounded, and the Radioman to ask after the wounded and talk to Robinson. Mostly to talk to Robinson. It was pretty obvious that Robinson had struck Winthrop all of a heap. The man was head over heels. They had long since reached the first name stage, and an occasional 'dear' was creeping in, so Russell suspected that the converse also held true. At the moment, however, they were all talking about the mess they were in. The drinking water was McBride's chief worry. He said, "We'll have to cut the ration again. Say, half a pint per——"

"And what about food?" Winthrop interrupted, "And, more important, air? At the present rate of consumption the food will be gone in two days, the water in six days, and the air in a little over a week." He laughed bitterly. "We're going to die of hunger, thirst, and asphixiation all at the same time. I don't think it's fair."

"Watch it, old man, your persecution complex is showing," said Russell in reproving tones. The conversation was becoming morbid and he wanted to stop that happening, otherwise they'd all end up by discussing at length their last full meal and feeling rotten about it. Speaking to McBride he went on, "But this whole situation is silly. Here we are, circling Venus in the two-hour circumpolar orbit, in radio contact with the North Pole colony almost constantly. Why, if it wasn't for the cloud layer we could *see* the base, and yet we can't get down. I know that we haven't enough fuel to go down, and they haven't any to send up to us ——"

"Correction." McBride cut in, "They have a little. They make it themselves with a small-scale extraction plant similar to the big ones on the moon which process it from the Lunar rocks. But the plant is incapable of producing fuel in bulk. They make only enough to send us up an occasional message rocket carrying oxygen and water tanks. If it wasn't for those rockets we'd be dead already."

Russell switched his attention to Winthrop.

"Your ship mounts the Allen Drive. Now, I know that the A-Drive doesn't operate in an atmosphere, but couldn't you figure out some way of making it do so?" he asked. "If you could rig it so's it would work for even half an hour, that would be long enough to allow the *Queen* to land us." He stopped, waiting hopefully.

Winthrop shook his head. "If I could do that I'd be the most famous man in the System," he said, and began to explain just why it was impossible.

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The chief difficulty was that the Allen Drive had been, quite literally, given to humanity. An extraterrestrial, posing under the name of ' Allen ' who had stranded himself on Earth, had exchanged the secret of the Drive for a means of transport off the planet. The details of the exchange had been hushed-up for security reasons, but the human race found itself suddenly in possession of a spacedrive which was efficient beyond their wildest dreams. Trouble was, they didn't know anything fundamental about its principles of operation. It worked, *and how*, but they didn't know *why* it worked.

A stream of particles emitted by a specially treated copper plate were focussed and accelerated to a velocity verging closely on the speed of light by a series of coils. The coils, which would have given a surrealist artist a neurosis just by looking at them, warped the fabric of space within their fields so that this terrific acceleration was possible with a very small consumption of current. The power came from somewhere, Winthrop said, but it was probably from another space-time continuum, otherwise there was a large loophole in the Laws concerning the Conservation of Energy. The particles, given almost infinite mass by virtue of their terrific velocity, could propel a ship the size of the *Queen of Darkness* around the Solar System with an acceleration of up to five G's. And the *Queen's* A-Drive unit was a cylinder measuring only ten feet by three.

Unfortunately, the Drive worked only in a vacuum. Even the slightest trace of atmosphere was enough to upset the delicate balance of forces within the coils, then the drive just snuffed out like a candle. That was why, he explained, all ships had to use chemical fuel and motors to take off and land on any planet which had an atmospheric envelope, though they could flit about in interplanetary space at top speed without a single worry about fuel consumption.

He ended by saying that some of the best brains in Physics were working on the problem, but without avail.

The dismal silence which followed was broken by the Station Chief. He said, " Even if we could work a miracle by making it operate in an atmosphere, it's no good talking about it. The Drive is wrecked. One of my men reported on it first thing. The final focussing stage, which hadn't been retracted at the time of the collision, was carried away. There was some other damage as well, so the A-Drive is a total loss. It can't be made to work at all."

" But surely you've got spares? " queried the doctor. " Didn't that new Space Safety Act say that all stations must carry replacements for every type of ship? "

" Ours hadn't arrived yet. They were being sent from Luna on the *Queen of Darkness*." McBride smiled wryly. " They're probably halfway to Mercury by now, with the rest of the *Queen's* outside cargo."

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" How do you know they were on the outside? "

Winthrop laughed. " Doc, you'd have made a great detective," he put in before the Station Chief could answer, " Always asking questions. Well, we know because I found the Bill of Lading in the ship's papers. I didn't actually see them being loaded——I was delayed and only got aboard a few minutes before take-off. But the cargo list says they were on the outer hull beside the port stabilizer, and they aren't there now . . ."

There was a commotion as Captain Allerton woke and began to act up again. Judging by the way he suddenly began waving and kicking, Russell suspected he'd been playing ' possum ' for the last few minutes. The doctor held him while Robinson administered another shot, then they rejoined the others.

Russell was out of his depth, and he knew it. An M.D. shouldn't be giving ideas to such high-powered technical talent, but there was something else he wanted to get straight.

" Why don't we call for help? " he asked. " Not to Venus, of course, but to Earth or Mars base? Isn't our transmitter powerful enough? Surely ships from Earth, Luna, or Mars, using A-Drive, could get here in a few days, and carry the food and fuel we need with them."

It was McBride who answered him. " Our transmitter is powerful enough, but we can't call to either the Earth-Moon system or Mars because they are both on the other side of the Sun at the moment——out of sight behind it, in fact. As we can't send a message right through the Sun, we'll have to wait until Venus moves sufficiently along in her orbit to bring them, not only into sight, but clear of the interference from the Sun's corona. Then we can send our S.O.S." He paused, then ended grimly, " That won't be for another four weeks."

*Four weeks,* Russell thought, aghast. They couldn't possibly survive that long, even by cutting rations in half. Still, people were tough. If the air would only last out. And the water . . .

The Station Chief broke in on his brown study by grunting something to the effect that he was going to the radio room. Robinson and Winthrop began talking quietly beside one of the viewports, their heads very close together. Once they actually laughed. Russell smiled to himself and went to make a quick check of his patients. This done, he propelled himself into a fairly dark corner of the room and set his body spinning slowly. The circular motion of the room around him had a hypnotic effect, he'd found. Sometimes it put him to sleep, and he would forget how terribly hungry he was.

Three days passed and things took a sudden turn for the better. The chemists on Venus somehow managed to step up production of the rocket fuel. Message rockets, their payloads consisting of tanked oxygen and

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water, began to arrive with increasing frequency. One even carried several cartons of the once-maligned black chocolate. The men in the station perked up. At this rate it would only be a matter of time before they were taken off. They would be mighty hungry, of course, but with air and water supplies coming in regularly, they'd be able to live through it.

Then came disaster. The small, experimental-model extraction plant on the planet blew itself to pieces through overload. There was no more fuel. The supply rockets stopped coming. And when next the base contacted the station, there was an uncomfortably forced quality about the operator's voice, as if already he was talking to dead men.

It was shortly after McBride had a long talk with the Venus base that Winthrop came to tell the two doctors the bad news. Robinson took it well. The doctor hoped his own emotions weren't showing in his face ——he wasn't proud of them. Then Winthrop began to stammer something else, but the words stuck in his throat at first. Finally he took a deep breath and burst out, " McBride wants you to leave, both of you. There's enough fuel in the ferry rocket for that." He looked straight at Robinson and said, " He thinks you people should go. You aren't space personnel, you just came here to help. You could've stayed on Venus. He says thank you, but you'd better go." He swallowed hard, and lowered his eyes. " I think you should go, too, before things get much worse."

Russell couldn't speak for a moment. His mind raced, bringing him feverish, chaotic pictures of the crusty colony loaves, the water-cooler in his surgery, the lime-juice issue, *meat* . . . He'd known about the ferry rocket standing by, but he'd never dreamed of being picked to go on its last trip down. Involuntarily, saliva filled his nearly-dehydrated mouth. But he couldn't go. It wouldn't be right. Cursing himself for being a stupid idiot, he spoke before he could have second thoughts.

" Things can't get worse, surely," he protested, " and what about the patients? One of us will have to stay at least. . . ."

" Doctor," the other interrupted harshly, " you don't know the half of it. The men are polite, on their best behaviour, when you make your rounds. They're grateful, to both of you. After all, you've saved a lot of their lives. But a few more days of this and they'll want to eat you soon as look at you. At the moment everyone is agreeable to both of you leaving on the ferry. Better go while you can."

" One of the wounded will go with you," he added. His face was expressionless, but his eyes, which studiously avoided meeting Robinson's showed the torture he was undergoing at the thought of never seeing her again It made something catch in Russell's throat. The doctor opened his mouth to speak, but his assistant beat him to it.

" Doctor Russell is right about someone staying with the injured," she

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said, as if Winthrop hadn't spoken. "But if he thinks *he's* going to be the hero, he's mistaken. I'm the logical one to stay. His job on Venus is too important——"

"Nuts," said Russell, and produced arguments. He grew quite heated. So did Robinson. They were fast approaching the level of rude name-calling when Winthrop shouted them down.

"Shut up! Both of you," he yelled in exasperation, "you're arguing your lives away. Are you both daft?"

"No," said Robinson, "We . . ." She hesitated, and reddened uncomfortably. It was very hard to put the argument into words. She went on, "I don't want to get corny and talk about ethics, or stuff like that. It would only embarrass us. . . ." She trailed off into silence.

Winthrop had some very hard things to say to Robinson. For a while it was really rugged. He wanted her to be safe more than anything else in his life, so he didn't mean the things he said, they were only a means to that end. Robinson knew he didn't mean them, Russell saw, so his insulting language was getting him nowhere at all. Winthrop had got around to the probably high incidence of insanity in her family, when she gravely interrupted him.

"Don't you like me anymore?" she asked. Her eyes were laughing at him.

Winthrop opened and shut his mouth several times. Finally he croaked, "Don't change the subject."

Russell couldn't help smiling, but it was an understanding, pitying smile. Winthrop's reason for wanting her safe, and her reason for wanting to stay put were one and the same. He wished that, somehow, they could both go to Venus, but he knew that that was impossible. As Robinson and the radioman had apparently forgotten his existence, he coughed gently and said, "As one of us will be staying, I suggest we prepare two of the injured for transfer to the ferry. We can decide which of us will accompany them while we're doing that. All right?"

He wondered if he could overcome Robinson and administer a knock-out shot, then load her on the ferry while she was unconscious. Still, she was a husky girl, though she didn't look it. Maybe he'd better have Winthrop help him. He'd never get over it if she beat him in a wrestling match.

As things turned out, he didn't have to pit himself against his assistant. The two cases were loaded aboard the rocket, and the doctors were still arguing like mad in the dining hall, when a man called Quigley sneaked aboard the ship and forced the pilot to blow for Venus base by threatening to detonate a box of flares in the control room. As the man had been handicapped by a multiple fracture of the tibia, this action aroused the

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secret admiration of everyone on the Station. Some of the men wished, a little wistfully, that they'd thought of it themselves.

Three days later, in order to save air, the Station Chief ordered everyone to refrain from all unnecessary movement or exertion. In rooms and corridors all over the station, men hung singly or in groups, just waiting. Hunger and thirst had become as much a part of their existence as the act of breathing. They could hardly remember it any other way. They were all pretty far gone.

In the dining hall nobody had spoken for a long time. It was too much of an effort. Winthrop and McBride were at the viewport. Russell could see their heads outlined against the white glare of the clouds. They were looking out, but he doubted very much if they were really seeing anything. Near them floated Robinson. She was using the point of her scissors to punch another hole in the strap of her watch. It had grown too loose again.

The doctor kicked feebly against a bulkhead and drifted towards the port. McBride gave an infinitisimal nod and made room for him. He said, " Thanks," and didn't recognise the sound of his own voice.

Winthrop ran a dry tongue around dryer lips and said hoarsely, " It wasn't our fault, you know. Honest. The A-Drive was switched off. There must have been a short or something. . . ." His voice tapered off into silence. McBride didn't say anything, it wasn't important anymore. Robinson came over and gripped the radioman's elbow gently. She didn't speak either.

With his eyes half closed against the glare, Russell stared sadly down at the planet less than a thousand miles below. He was thinking how very near it looked.

Something grabbed him by the back of the neck.

Allerton had broken free again. The doctor didn't want to do anything about it, he was fed up treating people when he needed treatment almost as badly himself, but he twisted around and gently disengaged the Captain's fingers from his neck. The hand, he noticed, was stained brown and reeked of antiseptic. The other gesticulated again, but not as violently as before. Weakly, but insistently, the Captain pointed at the opposite wall of the room. Russell looked. The others did likewise. Somebody gave a surprised grunt.

After a while Winthrop said, " You know, Doc, he must have been trying to tell us he wanted to write all the time, and we just kept on doping him." He shook his head disgustedly and used some strong language about his own personal deficiency in brainpower.

On the wall, in thin, straggling letters a foot high, three words were

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written, apparently with iodine. They said simply, *Pencil, Paper*, and *A-Drive*.

"Why 'A-Drive'," the Station Chief wondered aloud, "What can he know about that when he was here all the time?"

"We'll soon know," said Winthrop, and pulled a scratch-pad out of his breast pocket. "Anybody got a pencil?"

Allerton, when given the writing materials, began to scribble rapidly while Robinson held the pad steady. He was left-handed, the doctor suddenly realised. McBride couldn't make head nor tail of it, but Winthrop was used to the Captain's bad handwriting, and deciphered it for him.

"He was awake most of the time and heard us talking . . . Wanted to tell us but the Doc kept putting him to sleep. . . . Something about the A-Drive spares. . . ." Suddenly his voice rose excitedly, ". . . . Mistake on Luna, had to re-distribute mass to trim the ship. Before you came aboard . . . . Shifted cargo to——" Winthrop broke off, and looked long and steadily at McBride. Finally, he burst out, "You know what this means?"

McBride nodded vigorously, his eyes were alight and a wide smile opened cracks in his thick, dried-up lips. He said, "Ask him where he put them."

After that things became very technical. Robinson and the doctor just hung there while paper rustled and the polysyllables flew back and forwards over their heads. Russell was just about to interrupt to ask what all the excitement was about, when Winthrop turned to him and said sharply, "Just don't stand there, Doc. Start getting the men aboard the *Queen*."

Russell gaped at him.

"That's right, Doctor," said McBride, "We're leaving. Do you think you can brace the injured to stand a constant three G's?"

"Yes, I think so," said Russell dazedly, "For how many hours will the acceleration last?"

"Not *hours*, Doctor," the other corrected, "It will last for *days*."

It took about five minutes for the two men to convince Russell that they hadn't gone mad. After that, everybody seemed to forget that they were nearly dead from malnutrition, thirst, and oxygen starvation. They became very active indeed.

Dr. Gerald Mathewson, eighty-six year old Director of the giant Luna Base, bounced about on the seat of the pressurised car as the treads forced it over the broken ground. He was getting too old for this sort of thing, he knew, but he had wanted to see the *Queen of Darkness* come in.

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A thing like that happened just once in a lifetime.

The excitement had been intense, he remembered, when a point of A-Drive radiation was detected near the Sun. Obviously it was a ship making an unscheduled trip from Venus, but that was all they knew, because no ship's radio could function while the Drive was on. Then, when the Drive had been cut for a few minutes at turnover point, the whole story had come.

The doctor had done the talking while Allerton worked the ship. These two were the only ones still conscious, everybody else had been doped to avoid injury. He had explained about the smash on the station and the impossibility of landing on Venus, the food, water, and air shortage. And he'd gone into details about the way he'd had to fix the injured so's they could take three G's continuously.

Mathewson grinned to himself and looked at the two big, pressurised ambulances churning up the pumice ahead of his car. They were filled with men who were embedded like fossils in irregular lumps of tar-like plastic. His Medics, on first seeing them, had asked rather caustically whether maybe they shouldn't call Mining Division to *blast* the men out. But they'd been merely griping by habit, things were under control.

Just before the A-Drive cut in again and drowned out the signal, the doctor had told of the discovery of the A-Drive replacements, which were thought to have been lost with the rest of the outer cargo, *inside* the ship. They'd been moved, it seemed, to rectify an error in the mass-distribution of the cargo which had caused the ship's centre of gravity to shift. The alteration hadn't been recorded in the cargo List, and the only crewman fit to talk didn't know anything about it.

But the thing Mathewson would always remember was that landing. It was theoretically possible, everybody knew, to land on the airless Moon using only A-Drive, but pilots always eased down the last few miles on chemical motors. The Drive lacked delicacy of control for a direct landing. But the *Queen of Darkness* had come shooting in with three or four G's deceleration all the way, to land with scarcely a bump. It had been quite a trick.

Dr. Mathewson made a mental note to draw up some new landing regulations. Some of the other pilots would want to try Allerton's trick, and a lot of them wouldn't be able to pull it off.

Even with two hands.

*James White.*

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*If there are aliens amongst us, what shape or form do they take? And if we ever find them, how can we successfully expose them?*

# STAYING GUESTS

## By David Gardner

Illustrated by QUINN

George Daniels threaded his way through the lines of desks in the almost deserted outer office, and tapped on the glass panel of the door marked

NIGHT EDITOR
Please Knock

He paused for a moment and then opened the door.

"Oh, it's you, Daniels." Weston turned his attention to the papers littering his desk top and leafed through them. "Take a seat. The write-up on your act is around here somewhere. I won't be a moment."

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Daniels remained standing. "It wasn't about that I came to see you."

"No? What was it?" Weston found what he was looking for and placed it on top of the pile. He did not look up.

"Weston," George Daniels said, more calmly than he felt, "what would be your reaction if I told you that within half a mile of this office I had found a mutant?"

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The Night Editor of the *Daily News* tilted back in his chair and looked up at him. His colourless face was topped by a pair of tinted glasses and a shock of white hair. With a deliberate gesture he settled the glasses firmly on the bridge of his nose and frowned. "I would tell you that I wasn't interested in what you had found," he replied. "Minor mutations occur in even the most respectable of families; it's all a matter of genes. If one of the genes doesn't reproduce itself exactly, naturally there will be some slight varience from the norm. So what? It's news I want, not a discourse on genetics!"

Daniels met his annoyed gaze with a tight-lipped smile. "You're jumping way ahead of me, Joe. What makes you think I was referring to a natural mutation?"

"Look, Daniels," Weston said heavily, "I like you. I give you a big build up on your act at the Ritz. I tell the public that you're a top-of-the-bill hypnotist. That's true enough so maybe I haven't done you any special favours, but do me one—please don't bother me! And don't look at me like that, you can't *make* me believe you. Keep that sort of stuff to the stage, where it belongs. Remember, I can break just as well as I can make."

"I'm not trying to waste your time, Joe. I'm serious. I really mean it."

"Then you're certifiable!" He pulled a book from the bottom of an untidy drawer and opened it at the frontispiece. "Hell, Daniels, you're as familiar as I am with the findings of the Research Committee on. . . ." He looked again at the book. "On Hiroshima and Nagasaki. There were no appreciable variations even in the fourth and fifth generations after the bombing—though I do grant that it was contrary to all popular expectations. But those findings still stand, Daniels. You can't cast them aside with mere words: they're indisputable facts. No matter what *you* think."

George Daniels sighed and shrugged his shoulders as he walked towards the door. When he looked back at the editor Weston was smiling and shaking his head after him.

"All right, Weston, you won't listen to me, no matter what I say. You're the same as all the others I've tried to tell. God knows what other results the atomic war had on mankind, but it certainly robbed them of any freethinking powers and imagination they once possessed. Do you know what is wrong with the world to-day? I'll tell you—people can't or won't think for themselves. The human race is stagnating, it's washed up. It relies too much on the old books, but don't take them for gospel, Joe. You might regret it if you do! That book you are holding is two hundred years out of date—not to forget an atomic war. It could be wrong, Weston. It could quite well be wrong. And may God have mercy on us if it is."

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The door slammed behind him leaving the furrows of a frown creeping across Weston's forehead as he leafed through the yellow, brittle pages of the Committee's report. Somehow, Daniels' hotly uttered words had sent a disturbing chill running through him. Daniels had seemed so certain that something was wrong, that for a moment it ruffled the surface of his mind. But only for a moment, the book set his feelings at rest, and he laughed.

What Daniels had said about the human race losing its imagination was correct. It had demanded realists, not dreamers with high ideals to set the world to rights after the war of the previous century. And with the enforced harsh reality, imagination had been bred out of mankind in the following generations: there had been no place for it. No, if anybody was a mutant it was Daniels. His genes were the ones which had been shifted out of the pattern of normality.

Weston felt almost sorry for him. He was alone in the world and seemed to realise it. Daniels had referred to himself when he had spoken about discovering a mutant. The mutant had not only been within half a mile of the office, he had been inside it. And he wasn't dangerous, it was just that he possessed an imagination, a somewhat more flexible mind than most in this present-day world. It had been a joke—a poor one but still a joke.

Weston closed the book and prepared to forget; so far as he was concerned it was a closed episode.

Daniels ran down the flight of stairs and stood on the pavement outside Weston's office, the hour was late and the street deserted. A cool wind ruffled his dark hair and took the fire of anger out of his cheeks.

Weston was a fool—a blind, senseless fool, but he could draw small comfort from the knowledge. It sickened him, humanity was slowly rotting and not caring a damn. If the cave man had lacked imagination, man today would be little better than the beasts from which he had sprung. Idly, Daniels wondered how long it would take for this abyssmal lack of imagination and drive to kick the human race back to its beginning. Not long!

Then he remembered the mutant, and the night seemed suddenly chill and dark. He glanced behind him and started walking rapidly towards his lodgings on the other side of the town.

When he arrived he found that the front door was open. He shut it after him and switched on the landing light from the hall. He ran his fingers over the mail rack as he passed. There were no letters for him, not even bills. That at least was one thing for which to be thankful.

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"Mr. Daniels!" The voice came out of the darkness in the well of the hall.

"Yes, Mrs. Blair?" He paused on the stairs, one hand on the banister, and looked down at his landlady.

The words rushed out. "I know it's none of my business, but you aren't in any trouble are you?"

She sounded so perturbed that it was difficult not to laugh. His mouth twitched at the corners. "Not as far as I know. Why?"

"There's been a horrible man on the other side of the street, and he's done nothing but watch your window all day."

"A man, what sort of man?" He suspected that he already knew the answer, but when she spoke it still came as a shock.

"A little man in a wheelchair."

"God!" he muttered, and ran up the stairs. He had known the answer.

Down below, Mrs. Blair shrugged her shoulders and went into her own room at the end of the hall. Mr. D. was certainly acting queer. Jumpy was the word. Jumpy, almost as though he was afraid of something. She shook her head, and shuffled off to bed.

The door to Daniels' one room apartment creaked open as he removed his finger tips from the photoplate. Even as he stood there in the dark he could sense that the room had been entered whilst he was out. It had a certain feeling about it—an unclean feeling. When the light was clicked on that feeling was confirmed. Everything was topsy turvy. Empty drawers were piled crazily on the table, the pictures had been taken off the walls, the carpet was turned back, the blankets ripped off the bed and thrown in a pile in the centre of the floor together with his books and clothes from the drawers.

Daniels walked to the window: it was locked and barred, and the door was keyed to open only to himself and Mrs. Blair. Yet somebody else had been in.

There are things, he thought, which are neither man nor beasts, and I am the only one who knows—who believes that they exist.

Methodically he started to tidy the room. If they, or it, had been searching for notes, there were none. What little he did know was locked safely inside his head. Notes meant nothing when there were none who would read them, or if they did read them—believe in what was written there. It was the books that counted, the old books with the knowledge that was both dead and dangerous.

No, whoever it was who had searched his room had drawn a blank. And he had few doubts as to who it was, or the method of entry into the locked room. It would be the one that Mrs. Blair had seen. The man in the wheelchair. The thing with no legs. The thing who had been watching his window all day.

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Daniels walked slowly across the room and reached out a hand to draw back the curtains.

The sun behind him made his shadow bob to and fro over the cracked paving stones, and he wondered if he bobbed about as much as his shadow when he walked. If he did, it must be quite an amusing sight.

He looked about him self-consciously. Good! He was all alone but for the man in the wheelchair on the opposite sidewalk, and he was not watching. He was throwing crusts of bread to the pigeons strutting before him amongst the cobbles and weeds. Daniels had always thought that pigeons were more fussy than that, but it was an old warehouse area and in all probability grain was an unexpected treat for them.

The man was sitting in the shade of one of the warehouses in an ancient ' provide your own power ' wheelchair. He was muffled up to the neck, and there was a bright check blanket draped across his body where his legs should have been.

Daniels stopped to watch him, and the man looked up and caught his eye. " It's a lovely morning," Daniels called across.

The cripple nodded but did not speak, and Daniels had the uncomfortable impression that he was not wanted. He felt that the man was more concerned with feeding the strutting pigeons than talking civilly to a stranger.

To hell with you then, Daniels thought, and turned to walk on. He stopped and felt his mouth go dry. Out of the corner of his eye as he turned he saw one of the coping stones from the warehouse roof, its mortar base weathered, start to fall. The cripple and the wheelchair were in its direct line of descent. Nobody, much less a cripple could possibly get away in time.

" Look out," he shouted, without thinking. " Above you—stone."

The cripple looked up and vanished. One moment he was sitting there in his wheelchair feeding the pigeons—the next moment there was only the chair and the fluttering of wings. He shook his head. The chair was smashed and the stone in pieces.

" God," he sobbed, and started to run. He did not care where he ran just as long as he got away. In that one brief instant before the cripple had disappeared he had seen his legs. He was a cripple with the body of a man and the helpless dangling legs of a newborn babe. But that was not what had made him run, he knew that at all times throughout history there had been cripples, but here his stomach revolted, this one, however, was not a cripple. This one was new—different, he had no legs because—because he did not need them.

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Daniels sighed, the curtain felt soft and smooth to his hand, and he let his fingers linger there for a moment. The curtains were something he could understand and accept and he was loath to uncover what lay beyond. But it was something that had to be done. Now! He drew them open with a swift grab and looked down into the street.

It was as he had suspected all along. There on the opposite sidewalk, beneath the soft glow of a street light, was the watcher in his wheelchair. It was the same man that he had seen on the previous morning. It was the mutant who had no need of legs because he could teleport himself wherever he wished, even behind locked doors and barred windows.

He beckoned, and Daniels wanted to run. To run and *run* and RUN. He clattered down the back stairs and into the night. He fled blindly, madly into the darkness, seeking escape and not knowing where he could find it.

He made for the main street away from the blackness of the alley, for there, fingers seemed to beckon him, and every doorway and wall sheltered a man. A man who was little because of his baby legs, and yet bigger than man because of his powers. A thing which wanted him—him, Daniels!

He stopped short on the corner and cursed the lights, for they revealed what he least wanted to see. This time it was no figment of an overworked imagination. This time it was real—dreadfully, horribly real.

Drifting up the street towards him was . . .

A blur, a sudden unfeelable but conscious jerk in the night air, and the legless mutant was within arms reach.

Teleport, levitator, and what else! The thought was come and gone in an instant. Fear and nervous reaction made Daniels act, and act fast. He had no time to consider what he did, he only knew that it was a natural instinct, a form of self-preservation. He jumped forward, swinging wildly with clenched fists. He felt them sink into the unprotected soft pit of the floating thing's stomach. He saw it hurled away from him, striking the wall, spinning like a top, and falling.

He waited to see no more, upper hand or no upper hand he turned and ran.

Daniels was out of sight before the first signs of movement returned to the thing in the shadow of the wall. A grunt, a flickering of rueful admiration as stomach muscles were massaged, and then a sigh. Burdon floated upright and looked down the silent street. "You're leading me a pretty chase, Daniels," he murmured. "I almost admire you, but you're too dangerous—too dangerous for me to allow you to escape."

He drifted up the street after Daniels, his baby legs and malformed feet almost touching the sidewalk.

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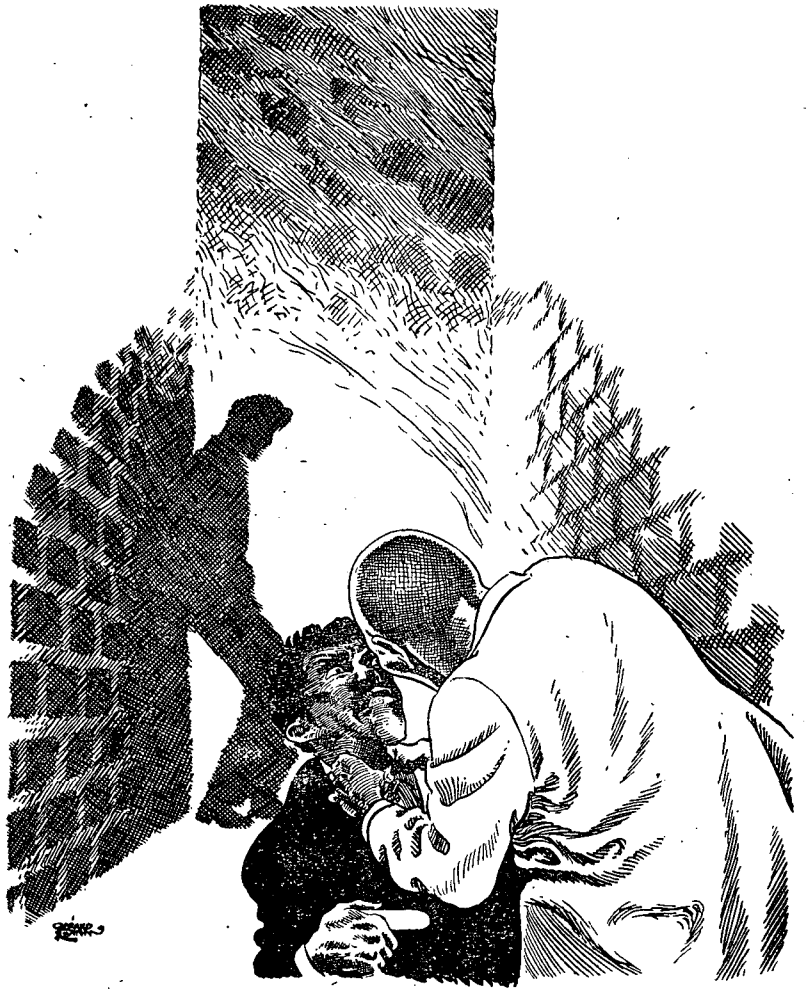

Here at least there were people and life. A lighted neon sign over the open doorway proclaimed to all and sundry that this establishment was, "THE BLUE PARADISE."

Daniels permitted a sigh of relief to escape from his heaving lungs as he slowed down to a walk. The sign flickered on and off at regular intervals, and he knew that this was one place where he could not be touched.

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To mingle with a crowd was his only means of safety, for the little man with the trailing no-legs wanted to keep his secret. Daniels was the only one who knew it, he had not been able to make people believe him, but they would if the man followed him in here. They would if they saw for themselves what he was like and what he could do. That was why he would stay away. And that was why Daniels knew that he would be safe —safe until *The Blue Paradise* closed down with the coming of early morning light. Then what?

But that could wait, take things as they come, he told himself. Maybe something will turn up, maybe there is a solution to it—somewhere—somehow.

He walked past the hat girl in the foyer, pushed aside the swing doors and found himself a table in the far corner of the room. The band was playing, and there were half a dozen couples dancing cheek to cheek in the centre of the floor. Daniels watched them thankfully, glad to find at least a certain amount of normality still remaining in his fast crumbling world.

Some of the tenseness vanished with the welcome warmth of the soft light and soft music. *The Blue Paradise* was a haven, and more than welcome.

"May I take your order, sir?"

The voice was in keeping with everything about him, soft and soothing. "Your order, sir?" It was soft but gently insistant.

Daniels kept on watching the dancers. "Whisky——straight. Better still, make it a bottle."

"Yes, sir."

Daniels relaxed still further, his eyes took in the whole room, and he suddenly felt lonely. Everyone but himself appeared to have a partner with them, there was a little tête-à-tête taking place at every table but his own. He was alone, all alone——no, not quite. There was someone else without a companion, sitting three tables to the left, a man. Daniels looked away as his stare was returned with interest. Out of the corner of his eye he could see that he was still being watched. No, it was stronger than watched; he searched for a word to describe it. Studied, that was it. He was being studied. He smoothed his hair down flat with a moist hand, and fingered his tie. His collar rode up at the back of his neck and he fumbled with the stud.

Still the man watched.

Daniels lighted a cigarette and knew that the man's eyes were still following his every movement. He flushed and felt hot and awkward. He wished the waiter would hurry back with his order. Drinking would give him something to do.

Blast the man! Why the devil did he have to stare so? He sneaked

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another glance and saw with relief the other unaccompanied customer look away, smiling.

" Your order, sir."

Thank God he had arrived at last. " Thank you. Tell me—don't look round—there is a man sitting three tables away behind you. He's by himself. Do you know who he is—what he is? He's been studying me for the past five minutes."

" Oh, you will mean the dark gentleman, sir. Yes, he often sits here by himself. Most unfortunate, sir, he is deaf and dumb. I think he finds some sort of happiness watching others enjoy themselves. He doesn't mean any harm by staring, I'm sure. Just try and ignore him if you can."

" I see. Well, that's alright then, but I wish he'd look at someone else. I can't be providing him with much enjoyment."

Daniels looked down at the table. The waiter was just about to place a coffee-pot before him. " Here," Daniels protested, " what's the meaning of this? I ordered. . . ."

" I changed your order. You want to be sober don't you? Remember you have still got to outrun or outguess your little friend."

" How do you know? " Daniels clutched at the waiter's arm. " I didn't say anything about him."

The waiter shook himself free. " Really, sir, I'm afraid I don't understand what you mean."

" Oh, no! Not you? " Daniels stared aghast at the deaf mute.

He slowly nodded his head. " Yes, me," he admitted, but his lips did not move. " I have waited a long time for something like this to happen. A very very long time, Mr. Daniels. Thank you for the information." He laughed inside Daniels' head.

The waiter was thrust aside as Daniels leapt towards the swing doors. The deaf mute followed slowly, now that he had found Daniels he would not be able to escape. Not unless he stopped thinking, and only death could bring about that.

Burdon of the small legs was waiting outside, overhead, just beyond the glare of the sign. He was waiting for Daniels to come out into the open where he would be alone, and he did not have to wait as long as he had expected Daniels ran beneath him, looking back into the pool of light that was *The Blue Paradise*.

Burdon followed, letting him run where he wished, until they passed out of the lighted streets and into a moonlit entry. He dropped out of the night sky, and it was then that Daniels saw him for the first time. He saw him but he was too exhausted to offer any resistance. Physically, and mentally, he was played out. His legs felt weighed down with lead, and his stomach ached and fluttered with nervous tension.

So this is the end, he thought. The end of everything. A new race of

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man is born and the old race has to die to make room for it. For better or for worse?

He closed his eyes and waited for the end to come. Loud footsteps sounded in the entry and he opened them again, trying to follow the elusive figures that kept him company beneath the moon and the stars.

His limbs felt lighter now as new life seemed to flow into them with the coming of the diversion. You accept something as inevitable and meet it with quiet resignation, not really caring, knowing that what has to be, has to be. Then something unexpected happens to give you a reprieve—a new lease on life. You do not know how long it will last so you grab, hold tight, and make the most of it. Cling to it, force the heaviness and the feeling of the end away. Here is your chance, take it man, take it! Run whilst you are still able. Get away!

He tried to convince himself that that was what he should do. But he knew all along that he would stay. He knew that he had to stay, because he was a man. Not a man of today, but an atavist—one of the old line of humans who had to know things and would not or could not merely accept them without learning the whys and the wherefores.

Burdon and the unknown were a single threshing heap in the dirt and grime of the entry. Daniels skirted them warily, just beyond reach, and gasped as he recognised the legless one's attacker, as the moonlight, for one brief instant, fell full upon his face. It was the telepath from *The Blue Paradise*. It did not make sense, and yet there it was—a fact, an unshakable fact. One mutant attacking another.

Why? What did it mean.

Don't bother about that, it doesn't matter. Whichever one wins will kill me to stop me talking. They have to do that, they can't be safe otherwise.

The telepath had his hands about Burdon's throat now. Slowly he tightened his hold, burying his fingers deep in the soft white flesh.

There was a flash and a moan. The hands fell away and both lay still for a moment. Then Burdon stirred and started to push the dead telepath off his body.

Daniels delayed no longer. This was his one last chance, whilst the victor was still too weak and exhausted to offer much resistance. He sprang upon him like a wild, mad beast. He kneed him in the pit of his stomach and brought his elbow down on the gasping, puckering mouth. He slammed Burdon's head from side to side with all the strength he could muster, pulping the flesh with his raw and bleeding knuckles. He heard teeth grind and splinter, then a sharp snap, and the mutant's jaw hung heavy and limp.

Carefully, deliberately, Daniels twisted and broke his neck.

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When he rose to his feet he felt no regrets. He was a murderer. It was the first time he had ever killed, and he knew that should he ever find another like this one he would do the same again, with the same lack of feeling.

He also knew that there was nothing to fear from the mutants, that they could be killed like anyone else. He smiled, now he had proof to lay before mankind. This was something they could not reject. It was something which would shake them to the core, maybe even shake them so hard that it would give them back that part which they had lost.

Daniels stepped over the two dead mutants and walked towards the street. First of all he would call Joe Weston at the *Daily News*, and drag him from behind the security of his news desk. The expression on his face would be something really worth seeing. What price his little yellowed bible on Hiroshima and Nagasaki now? Oh yes, there would be some radical changes in ideas and beliefs after this was made known. He could almost see the burning of the old books and the flames leaping higher and higher, burning the lies from between the covers.

Then after Weston had been told, he would contact one of the city hospitals. They would have something to do and think about, too. A little matter of what made the mutants tick, what made them different from the normal line of man.

Once out of the entry and under the lights of the street he quickened his pace. Somewhere along here, if his memory served him correctly, was a call-box. He started to whistle and then stopped suddenly as he caught the sound of something tapping the sidewalk behind him. The taps quickened as he slowed down. They drew level with him.

" Have you got a match or a lighter on you? "

Daniels stopped in mid-stride and felt in his pockets without thinking.

From behind him, and a little to the side the voice repeated. " Got a light, Mister Daniels? "

He turned on his heels and saw a grubby hand outstretched towards his own. " Certainly," he said, and shifted his gaze up an arm to the pale features on a level with his own. He saw the reflection of his own features mirrored in two pools of smoked glass. The lighter fell from startled fingers and clattered to the sidewalk.

There was something strange here. Something which did not ring true. It was—it was . . . " You said my name, how did you . . .? No," he shouted. " No! Not the blind too. Not another type."

The barest flicker of a smile crossed the blind man's face. He bent down and picked up the lighter. He blew a streamer of smoke into Daniels' face. " No, George," he said. " Not another type, because there are no mutants. You must be crazy to think that. Or maybe you don't read the old books? You should do, they tell you a lot of things that are

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useful to know. Such as the fact that there aren't any mutants."

It was hard to accept the fact that he was standing talking to one of *them*. Harder still to accept his statements. They did not conform with what he had found—but what if the old writings were correct? There must be a reason for everything. What then, was the answer? Ask and find out, that was the obvious solution. "Well who . . . What are you? You're not normal. None of you are. A cripple, a deaf mute, and a blind man, but none of you are as you should be if you are really . . ."

"Are really human," the blind man completed. "I assure you that I am every bit as real as you are, George. So are the other two back there. You see, George," he said gently, "we're not mutants. We are three separate and distinct races. And none of us bear any love for the other two."

"You see those stars up there? There are a lot of them, as you know. But living space beyond this system is crowded. Which you probably did'nt know. It has developed into quite a race to find habitable worlds, Daniels."

"You're from the stars!"

"We are from the stars," he confirmed. "All three races. And that race for living room has finally led us to your sector of the galaxy. We are visitors, or rather, staying guests. But it is something we don't shout about. There is room for others here besides your own people, and as long as they don't learn about us we can all go on living side by side without any undue trouble."

"*I* know!"

"Yes, Daniels," he said flatly, "I'm afraid you do know. But I will give you a chance of life."

This was madness, stark raving madness on both sides. He shouldn't be standing here not doing anything. The blind creature from the stars shouldn't be offering last chances of life.

"Yes?" It was the only thing he could think to say.

"You can go . . . No not yet, when I have finished with you. You did me a favour, if it had not been for you those other two would still be alive. You're to forget all you have seen and heard. For your own sake."

"I don't think I can." Now he knew that death was not imminent, Daniels had a tighter grip on his nerves. "It's something I want to remember. Something I want to shout about, so that the whole wide world can know."

The other removed his glasses. "I'm not blind. My eyes are unlike yours, that's the reason I keep them hidden. Look at me, Daniels." He caught hold of Daniels' arms. "Look right into my eyes and forget—forget everything. Everything!"

Eyes. Look into eyes . . . eyes. Strange eyes. Unearthly eyes, sparkling in the street lights. Facetted eyes—a thousand surfaces which sparkled red, black and gold.

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Daniels smiled and stared, he spoke soft words in a monotone over and over and over. It was a battle of willpower. A battle of mind over mind. It was human versus alien, and Daniels won.

He passed his hands over his face, and shook himself alert. The one weapon he could face with confidence, for the weapon the visitant had used was Daniels' means of livelihood. Well, Weston had said that he was good.

He could almost read the posters still to be printed and pasted to the billboards:

GEORGE DANIELS
Hypnotist Extraordinary!
See him at the Ritz twice nightly. Three times on Saturday.
Not even the man from the stars can resist his powers!

Daniels laughed out loud and tugged the unresisting creature, minus glasses and cane, towards Weston's office. There was no need now to drag Weston out into the night, he would take something to him instead. It wasn't a mutant, but something much better—much more startling: a visitor from outer space.

" Is Weston still here? " he asked at the desk.

" Yes, back there in his room. You'd better knock before you go in."

He knocked and walked in without waiting for a reply. His news item plodded in behind him. " You had better get your note book and fresh pencil out, Joe. I've brought something in which is headline news. I'm sorry about the mutants idea. I was wrong, but it led me to something bigger. Something the whole world's got to hear about. This is going to take some believing, but I've got the necessary proof. There are three alien races from the stars sharing Earth with us. And at the same time they're at loggerheads with each other. Now, what do you think of that? " He waited, smiling, waited to see what effect it would have on Weston.

Weston rooted in his coat pocket, his pale lips quirking up at the corners. " I believe you, George," he said softly and smoothly, " even without your proof."

" You knew! " It was a definite statement, not a question. The way Weston had spoken, there had been no room for doubt.

" But of course I did." Off came his green-tinted glasses, revealing many-surfaced eyes which sparkled with rich red, black and gold glints. " Surprised? "

His left hand held a silver tube, pointed at Daniels' head.

" Yes," Weston said, " I can see you are—very surprised. I'm afraid I can't use your news, George, you understand that, don't you? "

And his fingers closed down hard on the silver tube.

*David Gardner.*

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*To die or not to die—that was the question. Because if he did the first Moon rocket would blow up, and if he didn't another nation would conquer space first and justice would be damned eternally.*

# THE ETHICAL QUESTION

## By Lan Wright

Illustrated by CLOTHIER

The room was small. Its metal walls were painted dark green on the lower half and cream on the upper. The lone window was set high in the wall and the gaunt strips of the iron bars across it cast shadows on the large wooden table which was the main piece of furniture. At each end of the table stood two wooden chairs, but apart from these three articles the room was quite bare.

The blue uniformed warder stood aside from the automatic door to let Osborne pass inside, and said, "If you'll wait here, sir, they will bring him in."

Osborne nodded absently, his eyes taking in the details of the stark interior of the room. The door slid silently to behind him and as it did so he noticed another directly opposite with an iron grill covering an opening at eye level. Presumably that was the one through which they would bring Galbraith.

He sighed and ran a hand through his grey-flecked, black hair, then

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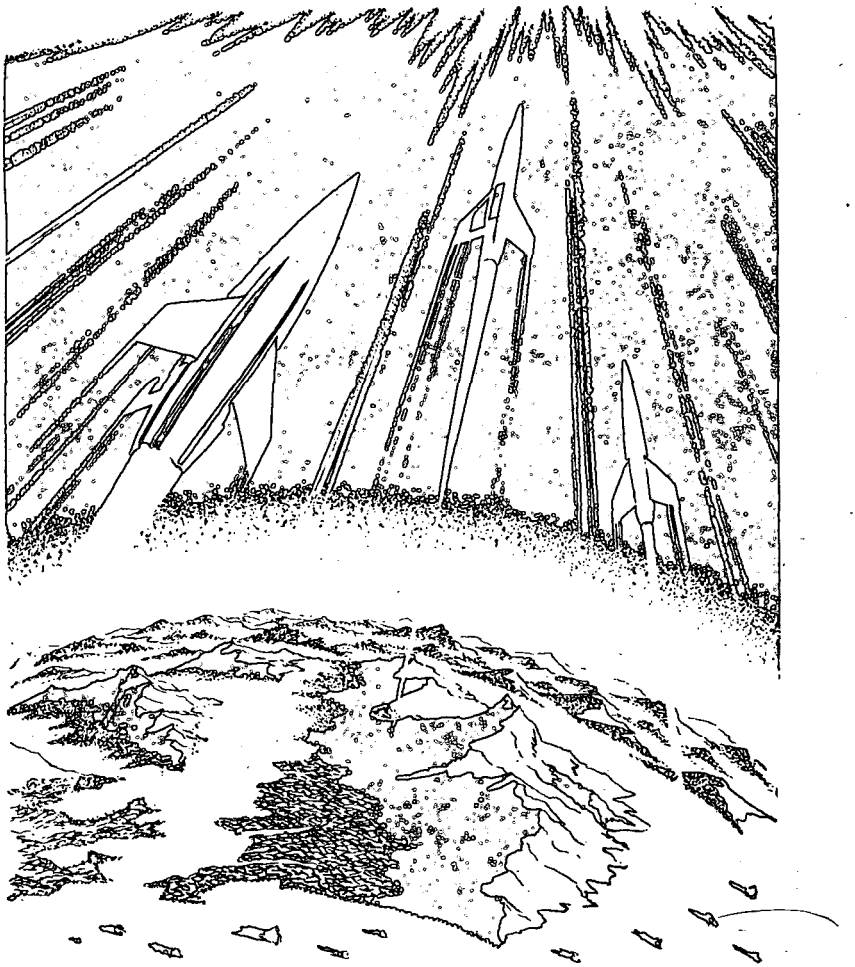

moved uncertainly towards one of the chairs to sit down. He hardly had time to relax before the second door opened and another warder entered followed by a tall broad shouldered man of about forty, dressed in the drab grey of the prison uniform.

Osborne rose involuntarily, his eyes taking in the heavy, florid face with its deep, compelling eyes. Even in the shapeless prison garb Galbraith

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had an aura of power about him, and Osborne was surprised that he did not look haggard and thin. There were no marks of worry as he would have expected a convicted murderer to show.

Galbraith's face brightened as he saw Osborne and he moved forward, smiling, his hand outstretched, " Bob, I'm glad you could come."

Before Osborne could reply the warder had moved quickly to stop their hands meeting.

" Sorry, no personal contact allowed." He motioned Galbraith to the chair opposite to the one which Osborne was using. " You have ten minutes, sir. I shall warn you when your time is nearly up. You may pass nothing to the prisoner except papers which must first be handed to me."

The warder walked back to the door which had closed after Galbraith's entry, and stood with his back against it.

Osborne flushed as he sat down. The redness of embarassment spread quickly across his thin, pale face as he turned to look at Galbraith. It was the first time they had met since the day of his arrest nearly two months previously and he was uncertain how to approach the task of greeting his former chief under the circumstances.

Galbraith was watching him in turn, a slight amused smile creasing the heavy lines round his mouth; it was he who spoke first. " Don't look so worried, Bob. You'll make me regret asking you here in a minute."

" I'm sorry, I——" Osborne choked on the words, conscious that he was making a complete mess of the studied nonchalance which he had made up his mind to produce for the meeting.

Galbraith laughed outright, " Come now, Bob. I'm the one in the condemned cell, not you, and I'm not worried."

No, thought Osborne, he's not, but he should be. Aloud, he asked, " What did you want to see me about? We have only ten minutes."

Galbraith stopped smiling and nodded. He leaned forward with his elbows resting on the table before him.

" Bob, you have probably wondered why I pleaded guilty at my trial."

Osborne flushed again; he had hoped that the interview was to be about some part of the project of which Galbraith had been the chief for over three years until—

" Yes, I did wonder."

" It was quite simple, really. It was because I killed them, my wife and her lover. It would have done no good if I had pleaded not guilty, because I did it in front of at least a dozen witnesses and I left my finger prints all over the gun."

Osborne stirred uneasily, " Really, I didn't come here——"

" To hear the gory details? " Galbraith showed white teeth in a humourless grin. " No, I realise that, and yet I must tell you everything in order that you may appreciate the rest of the story—the real reason why I

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asked you to come here."

Osborne sighed to himself resignedly. Once Galbraith was started on something like this there was no stopping him, as Osborne knew from experience, and even so he had no desire to hear how Galbraith had found out about his young wife's infidelity with Gary Marlow, the actor. He had read too much about it in the press to wish to go all over it again, especially when told by the murderer himself.

Galbraith relaxed in his chair. "I'll try not to bore you, Bob, but I must do this my way. You see, Ellen and I were very—close when we got married. Oh, I know she was eighteen years younger than I, but love knows no barriers, not even age, and I do really believe that she loved me, that is, until Marlow came on the scene." His brow blackened as the memories came back to him. "I would have forgiven her even that had she not flaunted his child under my nose, and almost boasted of it to my face." He got up from the chair with an angry twist of his body.

"Prisoner must remain seated," barked the warder.

Galbraith snarled viciously at the man. It was an expression of emotion of which Osborne would not have believed him capable. At that moment he was anything but the brilliant scientist who, for so long, had been the driving genius behind the Lunar Project. He sat down, however, his face dark with passion.

"That I could not forgive, and yet, short of death, there was no way in which I could punish them. Divorce?" He laughed. "That was what they wanted, and I wouldn't give that sneering devil, Marlow, the chance of flaunting his triumph to the world."

"Are you trying to justify yourself?" asked Osborne quietly.

"Not on your life." Galbraith laughed scornfully at the idea, "I need no justification to salve my conscience."

"Two deaths cannot be considered just compensation for your wounded ego." Osborne felt on safer ground now that he had overcome the atmosphere of the prison. He felt a growing resentment that Galbraith should have sent for him merely to explain why he had found it necessary to exterminate two human lives. Osborne could appreciate the evil which Mrs. Galbraith and Marlow had perpetrated, but he could not appreciate the murderous vengeance which had led Galbraith to shoot his wife and her lover before a dozen witnesses at a house party which the unfortunate woman was giving. At the time it had been suggested that the act had been unpremeditated, until the police found out that Galbraith had purchased the gun only three days earlier after obtaining a police licence to shoot rats.

"Can you think of any other punishment?" asked Galbraith more quietly.

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" Look, Galbraith, I didn't come here to discuss the moral rights or wrongs of what you did. I came because you asked me to come and because I have some admiration for the work you have done in connection with the Moon Rocket these last years. I figured I owed you that much."

Galbraith nodded, his deep eyes fixed almost hypnotically on his visitors' face. " How is it coming? " he asked.

Osborne breathed a sigh of relief that the other unpleasant subject was dropped, at least for the moment.

" We shall be on schedule," he replied, " Of course, the main part of the work was finished before you——you left. Since then we've been polishing up and rechecking as far as possible."

" Find anything wrong? "

" No, not a thing."

" Has the pilot been chosen? "

" Last week. Hansen."

" He's a good man. Did you have much trouble? "

" None at all, there were sixteen volunteers so we had to do it by drawing out of a hat."

Galbraith laughed gently, " All that science, all that technology, three years of hard work, and you choose the man to handle it by pulling his name out of a hat."

Osborne shrugged, " There was no other way. We forbade all the married men, but the single ones came forward en bloc. All things being considered there was little to choose between them even though we cut them down from thirty-five by means of a really stiff medical examination."

" When is the take-off date? "

" Next Thursday, the seven——"

There was a moment of blank silence which was broken by a sudden vicious laugh from Galbraith. Osborne sat still and flushed.

" The seventeenth, eh? Quite a coincidence, Bob? That's the same day I am supposed to hang."

Osborne cursed the fate that had made him say that he knew the date on which the Moon Rocket would take off. His discomfort showed all over him as he remarked with forced cheerfulness, " Perhaps you'll get a reprieve."

" Oh, yes," Galbraith sobered quickly, " I shall get a reprieve all right."

" I hope so."

" You don't hope anything of the sort," was the dispassionate reply, " But thank you for the sentiment. Incidentally, that is what I wanted to see you about. The reprieve, I mean."

" Me? Why? " Osborne's face was a blank.

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" You're the one who can fix it, Bob."

" What? You're mad. I can't——"

" Not directly, perhaps, but you can help." Galbraith leaned forward, his eyes fixed steadily on Osborne's face. " Do you really imagine that I committed such a clumsy murder merely to end up on the gallows for doing something which I consider to be morally right? You don't know me as well as I thought you did, Bob. I could have committed an almost perfect murder at any time I wanted. I say ' almost ' because there is no such thing as a really perfect murder, for the police today have too many scientific aids to assist them. In my case it would have been that much more easy for them since they had a first class motive, jealousy.

" I planned the whole thing from start to finish. I did it in such a way that the wheels of justice would move quickly, and they have moved with admirable precision." He laughed. " In fact, with almost remarkable accuracy since they have arranged the day of my execution to coincide with the day of the take-off for the Lunar Rocket. You see, Bob, I only planned this whole thing a few months ago and I had to leave everything until almost the last moment before bringing my plan to fruition."

He turned to smile again at Osborne who was sitting frozen in his seat, wondering vaguely if Galbraith's mind had not given way under the strain of his imprisonment and impending execution, but the smile was quite normal, almost friendly, and the eyes were not more than normally compelling.

" You don't believe me, I can see it in your face." Galbraiths tone was mocking. He sat back, his hands folded easily in his lap. " Do you remember on the day of the murder how I spent a long time in the ship? "

His mind now thoroughly bewildered, Osborne thought back—and remembered. He nodded.

" While I was in the ship I made a small adjustment which, while almost completely unnoticeable, will be quite fatal to the vessel if it attempts to make the trip."

Osborne goggled at him in open-mouthed horror, " You—you what? "

Galbraith smiled even more widely, " I think you are beginning to see it, Bob. The take-off is in six days time, and I do not think that in six days, or in six months for that matter, they will be able to find exactly what I did, and my price for showing them, for making the trip safe, is—a free pardon."

There was dead silence for a long minute while the facts sank into Osborne's stunned mind. For long seconds he could not grasp just what Galbraith had told him. He stirred at last, and said, dully, " You won't get away with it. They'll cancel the trip and take the rocket apart piece by piece until they find out what is wrong with it."

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"Oh no! I don't think they will," replied Galbraith. "Why? Well, for one thing, they haven't got that much more time. The Russians are on their tails and they have to get that rocket up there before them, and every day they delay makes the margin that much smaller." He smiled and shook his head. "No, they can't afford to wait that long. They can't afford to risk the weeks it would take to check the ship down to the last detail. That rocket has been three years in the building and there is another ten years' experience behind that."

"You could be bluffing."

"Sure," Galbraith lifted his shoulders and nodded agreeably, "Sure, I could be, and they can take that chance and hang me, then they can sit back and watch thirteen years' work and a hundred millions in cash go up before their eyes. Not to mention one very brilliant theoretical physicist and rocket pilot."

There was a long silence while Osborne digested the facts. If everything Galbraith had said was true and they ignored it then it would mean the end of the project, for it was certain that the government would not give further financial grants to make up for the loss. It was a 'one shot or nothing' scheme as far as officialdom went, and the only thing which had stirred them thus far was the certainty that the Russians would be attempting the same thing. They thought along the lines that what the Russians could do they could do better. The mere fact that they would be opening up new frontiers for the human race did not occur to the politicians, to them this was just a political necessity.

Scientists realised that, but they also realised that planetary travel would be a snowball that could not be stopped once the first trip had been safely accomplished. And it was all this that Galbraith was threatening to destroy.

Osborne shuddered. What if they took him at his word? Gave him his free pardon and let him fix the vessel? Could one man so easily destroy the facade of law and justice built so carefully over so many years? For what one could do with success others might attempt. He moved uneasily. Deep within him was the sick realisation that unless they found out what Galbraith had done within the next six days some very unpleasant things could happen to a lot of innocent people.

He asked, "Does it mean nothing to you that if you get away with this—this blackmail, you will be striking at the very roots of civilised justice?" He was vaguely aware of the pomposity of his question, but Galbraith did not seem to notice. His face twisted angrily and the smile slipped from his lips.

"Don't be a fool, Osborne," he rasped, "It won't do any good to appeal to me like that."

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"But——"

"Listen to me. You take my message to Carlson, he will pass it on to the proper authorities. Tell him what I've told you, that if I'm not given a free pardon then he can send that ship off at his own risk—or wait until he's found what is wrong with it, by which time the Russians will have beaten him to it." He stood up, towering over Osborne who remained slumped in his chair. "And tell him this, if he can find out what is wrong in six days then I deserve to hang, but while he and the rest of you are searching remember—I could have laid a few red herrings as well."

He turned, and the sliding door moved silently back as the warder touched a switch at the side, then Osborne was alone.

Professor James Carlson was built on pugilistic lines, and his rugged exterior was an effective camouflage for the brilliant mind that lay beneath. A broken nose and a twisted ear were ample evidence of a short and enthusiastic ring career during his last years at college. His crew-cut hair was greying at the edges and lent distinction to his thirty-eight years.

He had been Galbraith's chief assistant on the Lunar Project and upon his superior's arrest and conviction he had been an almost automatic choice for the post of Project Director.

He sat now, in his office, his normally cheerful face sombre as he listened to Osborne's story, his hands playing idly with a pencil.

Osborne told his story calmly and dispassionately, for he had had nearly four hours to think about it during the flight back to the Rocket grounds from the prison. All confusion and surprise had been put aside as he marshalled the facts within his brain, examined the possibilities and discarded the emotions which might cloud his judgment and analysis of the position. As a result, the story he told Carlson was a clear, concise account of all that Galbraith had said, plus his own thoughts and observations on the matter.

When he had finished he sat back and waited for Carlson's reactions.

The Director continued to play with his pencil for a long minute, then he said, "That's quite a story, Bob."

Osborne nodded.

"Of course, we'll search the rocket as thoroughly as we can in the time left to us, but I doubt if we shall find much. Even if we do there will be no guarantee that it isn't one of the red herrings that Galbraith mentioned." He drew a deep breath. "I'll have to inform the Minister."

"I wonder how he'll take it," remarked Osborne gloomily.

"I don't think he'll be very happy. Whatever happens the government will suffer."

Osborne looked surprised, "Surely they'll find some quiet way of settling it?"

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"How?" Carlson laughed harshly. "Look at it which way you like its bad for them. If they grant him a free pardon they'll be pilloried as the wreckers of justice, and if they execute him and hold the rocket back then they will be sniped at first for allowing such a thing to happen, and second, when the Russians get their ship off, for allowing a foreign power to put one over on them. Whichever way they jump they'll be unpopular enough to lose the elections next year."

"That's almost what Galbraith said."

"Sure, he can think the same as we can. He probably thought a lot about it before deciding to act, and with his brain you can be pretty sure its as near foolproof as he could make it. After all, he's gambling his life on his brains. He's got the odds figured about right as well, its a thousand to one we'll never find what is wrong in six days without his help." He gestured angrily. "Why, there are ten thousand things that could be wrong. To be absolutely certain we would have to take the ship apart piece by piece and put it together again."

"Couldn't they put off the execution?"

"With what object? If they do that it won't help at all. And besides we haven't any time to dither about it, its got to be the seventeenth. I had an intelligence report last week, it says the Russians are about six weeks behind us at the limit, and you know those reports, they could be as much as a month out."

"Then they'll have to pardon him," said Osborne, "They could do it quietly——"

"Damn it, Bob," snapped Carlson, "You can't keep a thing like that quiet. There are too many people involved. It would get out one way or another. Can't you imagine the results if one person like Galbraith manages to blackmail his way out of this? It will mean that any person, in the future, who is sufficiently important or indispensible will be able to use his position and his power as a lever to place himself above the law."

"Yes, I've thought about it," replied Osborne quietly. He rose to his feet, "I've thought and I don't see any way out. I need some rest, perhaps in the morning when I've slept on it——"

Carlson smiled tiredly, "If you have any good dreams——"

"I'll let you know."

Carlson's visit to Mr. Secretary Oates, the minister responsible for the whole of the Lunar Project, was a short one, and he sent for Osborne at once on his return. The black fury on his face told Osborne at once, as he entered the room, that the interview had not been a conspicuous success.

"Oates is a dirty stinking rat," were Carlson's first words.

"I hope you didn't tell him so to his face," said Osborne with a smile.

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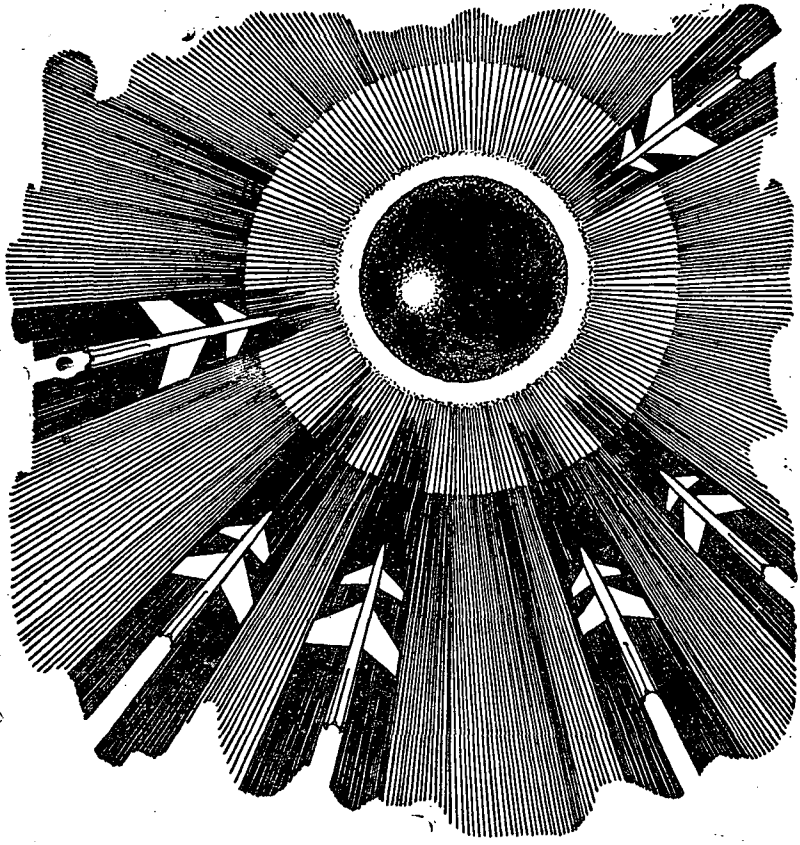

" Pah! I only wish I had, but I was halfway back home before I thought just what I could call him that fitted."

" What happened? "

" Well, I told him the whole story and he went up in the air at once. His first sensible remark was ' What do you think this will do to the government.' " Carlson swore luridly. " I know what I'd like to do to his whole blasted government."

" Then what ? "

" He'll sell us out if we don't find what's wrong in six days."

Osborne frowned, " I don't see——"

" Don't you? " Carlson turned on him, his face red with suppressed anger. " It's quite easy, Bob. According to Oates, whatever happens after next Thursday, the Russians will beat us to it. He can't pardon Galbraith and he can't stop the flight because if he does the government

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will fall at the election. So Galbraith is executed next Thursday on schedule and four hours afterwards the rocket will take off, also on schedule."

"What?" Osborne's face was comical with disbelief.

"And when it is destroyed, if Galbraith isn't bluffing, they will calmly announce that the Project was a complete failure and throw all the blame on the scientists concerned with it."

Osborne's face was white with horror, "But what about Hansen?"

Carlson bared his teeth in a savage snarl which accentuated his pugilistic ugliness. "Oh, he's single. Nobody really dependent on him, only some poor chit of a girl who'll get over it quickly when another man turns up. Hansen will be an unfortunate sacrifice to the cause of democratic government, to use Oates own words." He cursed again more viciously than before

Osborne sat back in his chair, stunned by the duplicity involved in what had seemed a reasonably clear, if ticklish, problem. "You could publish the whole thing."

"Don't fool yourself, Bob. Oates knows just who is involved in this thing and I'll bet you that we are watched day and night, every minute. If they're prepared to sacrifice Hansen they won't stop at ethical consideration of our two lives if we so much as say one word out of turn."

Osborne flapped one hand in white-faced bewilderment, "But——but they're the government——." The hand fell limply to his side. Carlson didn't bother to answer. He turned and crossed to the window, his hands thrust deep into his coat pockets.

Before him lay the wide expanse of the rocket field and in the middle of it, like a great silver cigar which gleamed with almost alien beauty, stood the towering bulk of the rocket ship.

"Three years of work," he said the words in a low voice, half to himself, "Three years and a human life to be sacrificed on the altar of political necessity. Damn it, Bob," his voice rose in angry denial of the facts before him, "we can't let it happen, there has to be a way out of this for all of us."

It was Wednesday, August the sixteenth.

Galbraith turned over sleepily in his prison bed, and made out the forms of the warders sitting at a table on the opposite side of the cell, playing cards. The sun streamed in through the tiny window above him, and he blinked as the rays caught the mirror on the opposite wall and were reflected into his eyes.

The sixteenth of August, he grinned to himself, according to the law he had only twenty-four hours more to live. Twenty-four hours, and there was still no word of his pardon, not that he expected any word until the last minute. They would go on searching as long as possible, he realised that; they might even go on looking so long that word would not

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come until ten minutes before the execution, though he hoped not, for the strain would be a little hard to bear.

He moved again and one of the warders rose and crossed to him.

" Ah, you're awake. Orders came last night that you are to move at eight this morning. You'd best get washed and dressed."

Galbraith frowned, " A trip. Where? "

The man shrugged, " Don't know any more than you do."

Galbraith got up and went slowly about the task of his morning toilet. He was puzzled and not a little worried. The only reason for a trip of any sort could be the Lunar Rocket. But why now? They had another day. Why this morning? Psychologically it was all wrong, for no man gave up anything as a bad job one second before he had to, especially something as vital as this.

He washed and dressed, and sat puzzling over the enigma while a warder shaved him with a safety razor. Then he breakfasted. One thing that had not suffered during his long confinement was his appetite, and one of the things which had surprised him about prison life was the excellence of the food. This morning, for the first time, he did not eat with his usual relish. There was a gnawing fear at the back of his mind that he could not account for. There was no question of them having put the rocket right, of that he was sure, they would not send for him to tell him so.

He puzzled over the whole thing for the next half hour, but the only certainty that emerged was that he was going to the Rocket field. That he knew even without official confirmation.

Promptly at eight he was taken from his cell out along the bare stone corridors, across the open prison yard to the large recreation field outside the walls. There a plane was waiting. It was large enough to carry him and the three prison officials who were accompanying him. Three hours later they landed beside the Administration Block inside the Project grounds.

They got out and Galbraith found himself looking up at the familiar walls which he had not seen for many weeks. He turned and saw the great bulk of the rocket looming large far across the field, and he felt a thrill of pride run through him as he saw the thing which, more than any other man's was so essentially his creation. True, he was not to be in at the kill, so to speak, but they could never take away all that he had put into it for so long. Whatever else was said of him they could not deny the credit which was so rightly his.

They went in through the main doors of the Admin. Block and along the white, clean corridors. They passed technicians and scientists going about their business and all of them looked curiously at the man who

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had once been their leader, but none dared to speak or to acknowledge him. He grinned at the irony of the whole thing. The only disturbing factor was an air of bustle and expectancy about the place which he had never known before, and he thought about it for some seconds before he realised that to-morrow was The Day. No wonder everyone seemed so excited.

The door before which they stopped was more than familiar to him, the title on it was the one which had been his not very long before, but the name of the man who held it now had replaced his own.

He passed through into the office of the Project Director.

" Hallo, Gal," Carlson was grim and serious as he rose from the desk and offered his hand to his former chief. Galbraith smiled and looked helplessly at the handcuffs. Carlson flushed and resumed his seat.

" Can't you release him now? " he asked the plain-clothes man in charge.

" Yessir, but we shall have to stay here in the room with him."

" Oh, all right." Carlson gestured irritably and turned back to Galbraith who waited until the cuffs were removed before sitting down opposite him.

" Quite a trick you pulled on us, Gal."

" It was necessary."

" Oh, quite. Even dirt is necessary sometimes."

Galbraith flushed and said nothing.

" Ever think just what a dirty trick you have pulled on us? "

Galbraith stirred uneasily, " You didn't bring me all this way to discuss the ethics of the case."

" No, I didn't. I just thought your conscience might react to the contempt we all feel over your betrayal."

Galbraith grinned widely. He seemed suddenly at ease as he replied, " Survival is the lowest form of human emotion and the most powerful, if I get out of this, any feelings of conscience I may have will certainly be drowned by relief that I have managed to survive."

" To get to the point," said Carlson ignoring the argument which Galbraith seemed to want to precipitate. " We brought you here for quite another reason. It would appear that your gamble has succeeded."

Galbraiths eyes narrowed suspiciously, " But you have another day? "

" Oh, no," Carlson shook his head, " We have had to bring the whole thing forward. You see, the Russians are closer to us than we thought two weeks ago, and whatever margin we thought we might have no longer exists. The first ship that gets off will be the winner and we are trying our darnedest to make sure it's us."

Galbraith relaxed again, " I see."

" However that may be, that is not the reason we brought you here."

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He reached beneath a pile of papers on his desk and produced a newspaper which he handed to Galbraith. " Look at the front page."

Wonderingly Galbraith took the paper and unfolded it to the front page. The headlines shrieked at him: ROCKET PILOT BREAKS WRIST! HANSEN CAN'T GO! MURDERER REPRIEVED TO TAKE HIS PLACE! WIFE KILLER GALBRAITH TO PILOT MOON ROCKET!

The smaller print below was lost in the haze which swam across his eyes. There was a deep hollow pit in his stomach and a twist of horror and fear in his breast as he read the inch high letters. Dazedly he looked up and licked his dry lips, " Is——is this a joke? "

" On the contrary it is deadly serious."

" But——"

" The take-off is timed for two seventeen precisely," broke in Carlson coldly and deliberately. " And at one thirty precisely you will be locked up in the ship with forty odd minutes to put right what you interfered with and get yourself ready for the take-off."

Galbraith was on his feet now, his face white, his eyes aglow with shocked horror. " What are you talking about? "

Carlson's smile was almost seraphic as he said, " I am talking about the method we have thought up for overcoming the problem with which you presented us, Gal. You see, for various reasons the government could not grant you a free pardon, and for reasons which you yourself have enumerated they could not put off the flight. Therefore, in conjunction with us, they have agreed to this compromise."

Galbraith's eyes glinted with sudden overpowering rage, " You'll never get away with it."

" I think we shall. You see, the story for public consumption is that as Hansen has a broken wrist he cannot make the flight, for various reasons you are the only other person in a fit physical and mental state who is qualified to make the trip. The general public is just dumb enough to go for the idea of a condemned murderer trying to work off his debt to society in such a way."

" I won't do it."

" You have no choice. There is at least a chance that you will return alive, and if you do then the authorities will no doubt give you a free pardon to satisfy a grateful public. They will not dare to hang a man who is a public hero."

" But the trip might not be a success? "

Carlson shrugged, " In that case the sentence of death passed on you in court will be suitably carried out."

Galbraith's face was a white mask of frustrated rage. He sat down slowly in his seat, his mouth twisted in an ugly snarl as he looked at Carlson who returned his gaze steadily and without wavering. He nodded

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slowly at last, some of the anger leaving his face and being replaced by a tight, mirthless smile.

"Yes, I see it, Carlson. All right then, I have no choice."

"None at all," said Carlson coldly. "And now we'll give you some lunch and a medical check up, though the prison authorities gave you a clean bill."

For the second time that day Galbraith's appetite was not up to its usual standard. The sudden upset in his plans had disturbed him completely, even the news that his execution was going through on schedule would have been less of a shock to him, but this—— the wind had been completely taken out of his sails, and even now that he could think about it more quietly he could not feel anything but apprehension about the whole thing. People, and people included governments, just did not react like this to such situations. The logical way out was to give him a free pardon as quietly as possible and make certain that the Project reached a successful climax as early as possible.

He accepted the odds with complete equability, there had always been a touch of the gambler in his make-up, and he found something exhilarating in pitting his wits against the odds no matter what the stake involved. No, he was not worried on that score, but there was something else, something which he could not evaluate and which he realised was only there because of some odd sixth sense that he could not explain.

His meal finished he was given a thorough medical examination, and a few minutes before one-thirty found him standing at the entrance to the portable hydraulic lift which would take him up to the main entrance of the rocket control room. The sun was hot on his head from the steely blue sky as he stood looking up at the bulking shape of the rocket. At that moment the Moon seemed very far away in fact as well as in miles.

"You have forty-five minutes," Carlson reminded him, "I hope for your sake it will be sufficient."

"If it wasn't I'd have said so before," retorted Galbraith shortly. He turned and let his eyes roam the faces of the group around him, Carlson tall and aloof, his face grim and unbending, the two prison officials, awed by the occasion and the rocket, but wary for all that, and at the back of them Osborne. Osborne——he caught his eye and smiled grimly at him, "Thanks, Bob, you did a good job of delivering my message." Then he turned without another word and entered the small lift.

The door swung shut behind him, and he turned in time to see, through the grill of the gate, the faces of the group as they slid away below him.

The interior of the rocket head was confined and cold, but the cold was comforting after the heat outside. As he entered, the double airlock door

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swung shut behind him. Now it was impossible for him to get out without external assistance, though once the ship was space borne the locking relays would be broken ready for the landing on the Moon.

He smiled cynically, he himself had suggested such an arrangement in the design in case they should be faced, at the last minute by a panic-stricken pilot who wanted to get out. With such a deterrent it was not likely that anyone would try. Little had he realised when it was fitted that it would be used to imprison a murderer, and even less had he thought that the murderer would be himself.

He reached down for the floor of the tiny control room and began to unscrew the small hatch leading down to the instrument and fuel chambers. When opened it was just wide enough for him to squeeze through, he took a spanner and a screwdriver from the tool chest and lowered himself through the hatch. Forty minutes should be ample but he was not going to cut it too fine.

Actually it took twenty-five, and he breathed a sigh of relief when he finally hauled himself up through the hatch and closed it behind him. He replaced the tools in the chest and locked it away in its rightful place, then he sat down on the compression couch and reached for a cigarette.

Of course there were none.

He laughed a little bitterly as he realised that he might well have smoked his last back in the canteen before his medical exam., he could only relax and watch the seconds tick away——and think. Even the chronometer was a silent one and he had not even the consolation of its tiny, monotonous sound. There was nothing to do but wait.

At two precisely he was disturbed by a faint whining rustle down in the depths of the ship as the remote control operators in the control tower started things moving in the machinery. At ten past the loudspeaker above his head began to buzz faintly, and Carlson's voice came, loud and metallic, " Hallo, Gal, Carlson here. Are you receiving me? Over."

Galbraith reached for the radio and turned it to speech.

" Hallo, Jim. Loud and clear. Over."

" Carlson. Are you all set? Over."

Galbraith smiled faintly as he switched back, " Yes, everything is ready. I'll strap myself in shortly."

" You're sure everything's okay? " Carlson's voice had an anxious, almost urgent tone to it which made Galbraith frown in momentary annoyance.

He replied testily, " Yes, of course I'm sure. I'm strapping myself down now. Over and out."

He flicked off the radio and settled himself back on the soft, rubberised couch, pulling the restraining straps tight around his limbs and body and checking each of the buckles carefully as he did so. By the time he had

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settled his head on the pillow there was less than a minute to go and the machinery below was taking on a more urgent note which mounted in pitch as each second slipped by. He turned his head to look at the chronometer above him, and as he watched the moving hand each second seemed to pass on wings of lead. Within his stomach he felt the faint rumble of apprehension and he strove angrily but unsuccessfully to suppress it.

The second hand flicked towards the top mark on the dial and he felt his breath coming heavily from his lungs. The whine of the machinery had reached its topmost pitch now and was a steady, monotonous song which rang through his whole being. There was a tightness in his chest and his eyes seemed to blur slightly as he watched the moving hand. The sense of apprehensive fear grew, even as he strove to fight it down, and his sight grew dim. There was a distant rushing and roaring in his ears, a sound which seemed to rise even above the sound of the machinery, as if all the seas of Earth were rushing to engulf him. He struggled against the unconsciousness which swept up to overwhelm him, aware only dimly that he was fighting for breath against an overpowering strain on his lungs. And then, suddenly, his senses left him, and the sweet rush of oblivion beat back the physical torture which had threatened to tear his body asunder.

He awoke at last. There was a throbbing pain in his head and a dull ache behind his eyes. His whole body ached and he was aware of a silence which engulfed him utterly, a silence which was broken by a slight, unidentifiable rustle. And then a voice said, "He's coming round."

Panic seized him as the sudden impact of a human voice burst upon his brain. He struggled to rise but found his strength was not equal to the task. He opened his eyes, squinting with the pain which the effort caused him, and found himself looking up at an all too familiar ceiling. His panic grew as he turned his head and saw Carlson and Osborne and three other men looking down at him.

His tortured brain reeled again under the shock as his eyes confirmed what his ears had told him. He was not in the rocket where he should have been, he was back in Carlson's office.

And then he found that he was handcuffed.

As he struggled frantically to sit up Carlson moved forward and put a hand on his shoulder to help him. He made it, and sat for a moment gasping under the effort and wondering why he felt so weak.

"It'll wear off in a minute or so," Carlson told him reassuringly.

"What the devil's the meaning of all this?" Galbraith's voice was harsh, suspicious and angry all at once.

"Just a little gas. You'll soon get over it."

"Gas?" It was a question, but even as he asked it Galbraith knew

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the answer. It swept over him in a gigantic wave of horror-stricken realisation, as if every piece of a giant jigsaw puzzle had fallen abruptly into the right places.

" You——." He could find no epithet to express his feelings, but the white rage and terror on his face showed his state of mind, and Carlson looked quickly away from the hate which was directed against him.

" Of all the filthy, double-crossing——," Galbraith could not go on with his tirade, he could only sit, literally trembling with impotent rage.

Carlson said quietly, " You should know all about that, you started it." He turned back towards Galbraith and his voice was almost pitying as he went on, " I'm sorry, Gal. I didn't like it, it isn't the way I like to play, but I had to go along for the sake of the project. It was too big to throw away without a fight, even a dirty one."

Galbraith sat slumped on the couch, every atom of strength was drained from him now that his raging passion was subsiding. Now, there was only weak, sick despair as the realisation of his fate sank into him. He said, huskily, " The flight was not brought forward? "

" No, Gal. It'll take place tomorrow——on schedule."

" That newspaper——? "

" Faked up for the purpose."

" And the gas? "

" Atomised X230. To give you the impression of physical discomfort."

" As if the rocket was taking off." Galbraith nodded slowly. " I might have guessed. I think I did suspect, but——"

" I don't think you would really want all your great work thrown away like that," said Carlson slowly. " Whatever has happened since cannot take away the glory that will be yours when this is the success we know it will be. They can't take that away from you, Gal, they can smear it with a little dirt but that will be lost in history beside the magnitude of the job you have done. Deep in your heart you wouldn't want it said that you, its creator, came so near to breaking it. What success there is will be yours, Gal, more than anyone else's, and mankind will remember it when they reach the stars."

The eyes which looked up at Carlson were calmer now, the bent shoulders were a little straighter and there was a twist to the lips which had a hint of humour and of gratitude about it.

Galbraith nodded, " Thanks, Jim, I'll remember that——tomorrow morning."

*Lan Wright.*

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*Here is another interesting article from Mr. Newman, dealing this time with electronics and some of the developments in improving vacuum tubes.*

# SEMI-CONDUCTORS

## By John Newman

Radar, flue dust, cat's whiskers and the theory of electrical conductivity appear to have little in common yet, between them, they cover a new development in electronics, one whose potentiality is as far-reaching as was the discovery of the thermionic vacuum tube forty years ago. They are linked in the story of semi-conductors, crystalline materials that, when pure, are bad conductors of electricity but, when alloyed with tiny amounts of other elements, have many unusual and useful electrical properties.

Living in an era of radio, television and electronic " brains " few people realise the limitations and inefficiency of the ordinary thermionic valve and it wasn't until the development of radar and the use of shorter and shorter wavelengths during the war that a serious search for alternatives was made. Thermionic valves are almost useless in the centimetre wavelengths, and crystal diodes (the crystal and cat's whisker of the early days of radio brought up to date) are used. Many materials were tested as crystal components before silicon was finally selected as the most satisfactory and mass-produced for radar detectors.

Amongst those tested were crystals of the element germanium, the main source of which is flue dust, and these were used to some extent as simple diodes for radar detectors. At that time it was not realised that the germanium available was far too impure and that its conductivity is critically dependent upon minute traces of particular impurities. It was not until five years ago that two workers in the Bell Telephone Laboratories, Dr. J. Bardeen and Dr. W. Brattain, found that special germanium

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crystals with suitable electrodes could replace thermionic triode valves in practically every capacity. Their gadget used two metal points touching the germanium surface, so it was called a point contact transistor.

Recently a radically new type, called a junction transistor, with soldered contacts and using two types of germanium crystals has been developed by Dr. W. Schockley. This appears to have many advantages over the point contact type as well as being easier to manufacture. Other crystals which have similar properties to germanium are silicon and diamond but since the last war only germanium has been used to any large extent in these new gadgets using semi-conductors. The most important of them are transistors, others include thermistors for measuring temperatures, photo-transistors for measuring light intensities and germanium diodes for rectifying current.

The development of transistors came at a crucial time for, with the increasing complexity of modern electronic control and computing equipment and the multiplication of circuits, the drawbacks of thermionic valves were making themselves self-evident. Every time you double the number of valves in a circuit you double the chance of a breakdown due to a valve failure. An electronic computer containing 18,000 valves has an average of up to 1,000 valve failures a month. The trouble is that it is impossible to say what the life of a single vacuum tube will be; by testing a large number to destruction it is possible to work out the average life but, in practice, it may fail after five minutes or five years and give no warning before it does so.

On the other hand junction transistors are reliable for at least ten years (calculated figures are 90,000 hours for the junction and 70,000 hours for the point contact type). Mounted in plastic they can be soldered directly into circuits and only take up a four-hundredth of a cubic inch of space, about a fiftieth of that of a typical sub-miniature valve, besides being completely proof against moisture and corrosive gases and solutions. It is almost impossible to get two vacuum tubes with the same characteristics, they all vary so much that each tube is in reality an individual type. For most jobs this doesn't matter but, for some, each tube has to be accurately calibrated before it can be used. Junction transistors, on the other hand, can be made with characteristics so similar to one another that it is almost impossible to distinguish between them by their performances, very useful where reproducibility is important. They can withstand 20,000 gravities and have no vacuum to go " soft," no glass to crack, no degassing of metal components is necessary and there are no heaters to burn out.

The absence of heater coils means that transistors start instantly when switched on and that large numbers of them can be closely grouped together without the need for elaborate air cooling devices. This, combined

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with their reliability, makes them ideal for large electronic computers. For example the ENIAC computer uses 18,000 vacuum tubes but the more recently constructed computer SEAC, built by the U.S. National Bureau of Standards, contains only 875 vacuum tubes. These are used solely for power amplification and for energy sources, the actual computing components being 12,800 germanium diodes. There is another advantage in using germanium units, for many computers work on the " flip flop " system using a pulse change back and forth in two valves from one stable state to another. A special single germanium unit with two stable states can be used to replace these two valves, this having the number of units required.

What is it about semi-conductors that makes them so useful in these gadgets? It is fairly easy to understand if we consider an atomic model, for a current of electricity is a movement of electrons in space. The movement can take place in a solid as in copper wire, in a liquid such as salt solution, in a gas as in a neon tube or in the vacuum of a cathode-ray tube. In all these cases the movement depends upon an electron potential difference, measured in volts, but the mechanisms are not all the same. We are only interested in the movement of electrons in solids, which are broadly classified as good or bad conductors depending upon the ease with which the movement can take place.

The electrons in orbitals around an atom fall into two classes, those near the nucleus are strongly attracted by its opposite charge but the outer ones are not as firmly bound and are known as the valency electrons. They are more mobile and are the ones which take part in chemical reactions, bind atoms together and the movement of which is known as an electrical current. Atoms are called mono-, di-, tri-, tetra- and penta-valent according to whether they have one, two, three, four or five of these electrons.

In a metal conductor the atoms are arranged in an ordered crystal form but not all of the electrons are tightly tied to the atoms, some of the electrons are free to move in the lattice with little hindrance in the form of an electron " gas." The lattice itself is not a rigid structure, the atoms are more like vibrating blobs in a quivering jelly, the rate of vibration depending upon the temperature. Because of the ease with which electrons can change places with one another there can be little potential difference between one part of the conductor and another.

On the other hand an insulator gives great resistance to the passage of electrons through it because none of the valency electrons is free. They are all used in binding the atoms together, one valency electron combining with that from another atom to give the spin coupled electron pair necessary for a strong covalent bond. In silicon, germanium and diamond

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there are four of these to each atom so that the crystals are made up of atoms linked together in the form of tetrahedrons. These binding electrons are freed by increasing the vibration of the lattice by heat or by bombarding it with high energy radiation.

However, we can change the electron behaviour of such non-conductors by introducing small amounts of other atoms into the crystal without changing the shape of the lattice. Depending upon the type of element used to replace the original atoms two types of semi-conductors, known as n and p types, are formed.

The n type is so called because its conductivity depends upon an excess of *n*egative electrons which are introduced by adding atoms with more valency electrons than those replaced. If a few of the tetra-valent germanium atoms are replaced by penta-valent antimony atoms only four of the five electrons of the antimony form bonds and the fifth one is so loosely attached that it can easily move under the influence of a small potential. Thus a series of mobile electrons are available to carry a current.

If atoms of a trivalent element such as boron are added a p type semi-conductor is formed, p because the crystal contains *p*ositive points. This is because only three of the four germanium electrons can form bonds with adjacent boron atoms and the fourth possible bond is minus an electron. This acts as if it was a positive hole in space and electrons can jump into it, still not being strongly bound, leaving a hole elsewhere. Thus, by jumping from one hole to another, electrons can traverse the crystal, the holes appearing to migrate in the opposite direction at about half the speed of the electrons.

By combining a p and an n type of germanium in a bar as p/n a simple rectifier to pass a current in only one direction is formed. If this is set up as — p /nt, the — and + indicating the electric potentials, the current cannot flow because the positive holes in the p part are pulled away from the junction by the negative charge and the electrons in the n part are pulled to the positive charge (opposite charges attracting one another).

A junction transistor can be made of p/n/p or n/p/n zones in a bar of germanium, each zone having a contact wire soldered to it and corresponding to the cathode, grid and plate of a triode valve. By amplifying the voltage, junction transistors can amplify the power 100,000 times although it can give no current amplification.

A point contact transistor consists of two fine wires touching the surface of a tiny block of n type germanium, the contacts being two-thousandths of an inch apart, with a third contact soldered to the base of the block. During manufacture the areas near the wire contacts are changed to p type so it is really a p/n/p form transistor. The point contact transistor works similarly to the junction type but there is the very useful

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point that the current as well as the voltage is amplified; an adequate explanation of this has not yet been worked out.

In spite of the small size of transistors the amplification per stage is equal to that obtained from ordinary vacuum tubes, making them suitable for radio receivers, particularly portable sets where their low power consumption does away with the need for bulky accumulators or batteries. A vacuum tube uses one watt to amplify a signal of a millionth of a watt but a junction transistor only *needs* a millionth of a watt and can be made to work on less than a tenth of this. They can withstand enormous overloads, up to 10,000 per cent., for periods of the order of milliseconds.

Naturally transistors have their shortcomings but these seem small in comparison with their advantages. They give a larger background noise than thermionic valves but the junction type is 1,000 times less noisy than the older point contact type. This background noise is the main reason that silicon cannot be used in transistors instead of germanium, for silicon gives so much noise that it is sometimes used as a "noisiness" standard. Background noise and the conductivity of semi-conductors is markedly dependent upon temperature and, whilst this is made use of in thermistors, it means that transistors cannot be used above 70°C., the upper limit for special vacuum tubes being 500°C.

Because of their small size the transistor's current carrying ability corresponds to two watts, although germanium diode rectifiers are being designed to handle three hundred amperes at a thousand times the current density of normal copper oxide rectifiers.

The cost of transistors is several times greater than that of ordinary valves due to the method of manufacture and the very high purity of the germanium used; it is repeatedly crystallised in small graphite crucibles until the necessary purity is reached and it can be grown into long single crystals. Every one of the quarter of a million made last year was carefully assembled by hand under a microscope.

If a mass production method can be used to lower the cost it is estimated that the annual production will rise to ten million in a few years time. As yet they are not on sale to the general public, most being used for special communication equipment, decreasing the weight to a tenth of what it used to be, and for research purposes. Combine transistors with the technique of printed circuits and we're well on the way to getting those wristwatch size radio receivers and transmitters we've heard so much about.

But we won't get them for some time. We're more likely to first hear of transistorised equipment in the control circuits of atomic power plants and spaceships. Or, if we're not so lucky we may meet them in guided atomic missiles, a somewhat fleeting acquaintance.

*John Newman.*

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*As a limbless body he was useless on Earth, but in space, with mechanical limbs, he could endure far greater stresses and strains than ordinary humans—and be of some service.*

# MAN ON THE CEILING

## By E. R. James

Illustrated by QUINN

Tirelessly, expertly the supple fingers worked over his skin. The palms slapped on the cooling lotion. The hands smoothed it in, kneading the muscles, working gently around the artificially lengthened tendons dangling loosely where his arms and legs had been.

As they were withdrawn and the final, characteristic slaps were administered, Derrick Crocker sighed with pleasure and wriggled his limbless torso.

He opened his eyes. Almost he started. For the massage—hitherto always associated with home—had made him forget. He narrowed his eyes against the glare of the stars from the backdrop of Space. Not many

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men would think of the steel and concrete mining station on the innermost moon of Uranus as home.

He turned his head sharply. It did not do to dwell on his differences from other men; at least not on those that were not to his advantage. Beside him, in the little cabin of this, his personal ship—not many men could afford to own a spaceship, however small—his personal orderly was cleansing his hands in the folding toilet.

"Peters," he said, "that was grand. Better even than usual."

"Thank you, sir." Peters collapsed the toilet into the recess. "I don't expect you'll want to be connected back into the ship for the landing on Titan?" He looked up at the rear-pointing TV.

Derrick leaned his head back on the mattress. On the screen Saturn blazed in the blackness, a crescent of burnished gold, its horns set with emeralds, the portion of the rings lit in their view as brilliant as a circlet of diamonds—a cross-piece of pure light. "No, Peters, I'll wear my limbs."

"Very good, sir."

Derrick lifted his head. Peter's arms slid below him, lifting him in their cradle. Strong arms, gentle arms—sometimes, as now, they seemed hateful arms. It would be an ordeal to have to meet strangers on Saturn's moon. People stared so. A spaceman without limbs. On Earth there had been more than one article and TV talk about him. An oddity. Peters might be a servant but he was devilishly well off—just in having them. Human arms.

Now they were sliding him down into the harness of his mechanical limbs. The face above them was a homely mask. Peters never spoke at moments like this.

He was crouching in the cramped space, connecting the snap fastenings of Derrick's lengthened tendons to the controls of the caterpillar tracks that served him for legs. Arms next. Derrick stared out into Space with smouldering impotence.

Then the slack was being taken up in the controls. "Comfortable, sir?"

"Mmmm——" Derrick tensed his shoulder muscles, lifting his metal arms and resting them on the control panel before him. "Yes. Fine, thanks." He wriggled himself to a more comfortable set of his body and Peters finished fastening him in.

"That's all, sir." Peters sank into his own seat.

Derrick sat tensely, trying not to brood. The Planetary Physics people already on Titan would get used to seeing him. He might not be useful to them, as he had been to the men of the Uranus Opencast Mining Corporation and as he would be to this new attempt to win diamonds of unearthly size from gigantic Saturn, but his strangeness would be no more than a nine-day wonder—to them.

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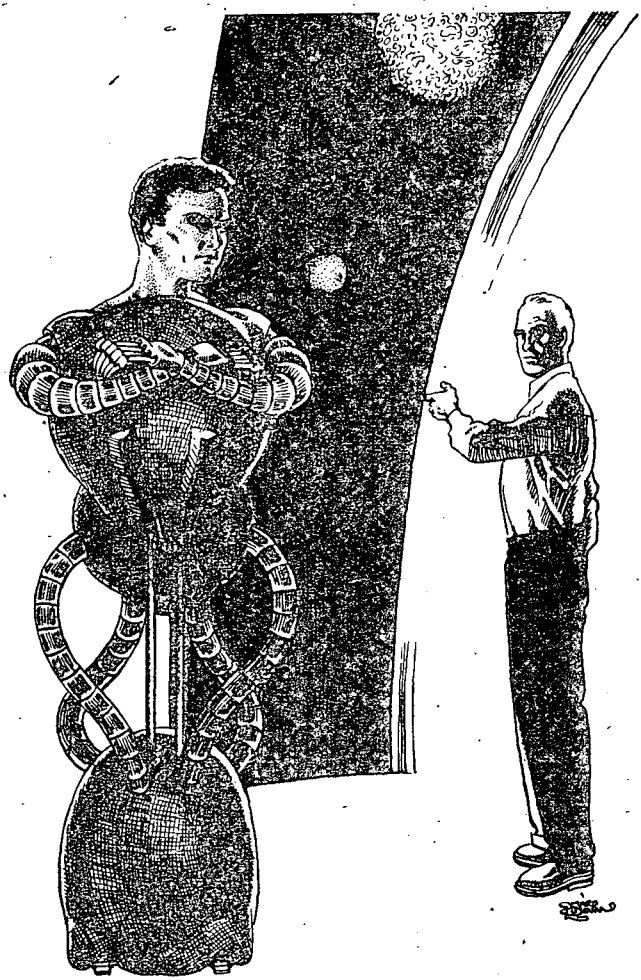

Through the background sounds of the ship in Space, Peter's clothes rustled. " Sir? " he asked. " Why Saturn? "

" Eh? " Derrick turned his head. " Oh, you mean: why try to open mines on Saturn—which has six times the mass of Uranus—while Neptune is still unexplored. . . ." He lifted his metal arms and then allowed the single gravity change in speed—as they slowed for the landing on Titan—

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to bring them down, clattering, on the edge of the control panel.

"Who knows the working of the official mind," he said. "Munro didn't explain, apart from saying that Saturn, being so much bigger, should produce bigger diamond strata." He stared up through the bulge of the front port in thought. "Come to think of it, though . . . there are plenty of reasons. Neptune may be a second Uranus in size and weight—both have about four times the radius of Earth, but it's half as far again from Earth. Transport costs'd be high. Saturn's halfway in to Earth—at favourable positions in their orbits—so transport costs'd be lower than with Uranus; profits bigger accordingly.

"Yes. . . . Then there's the technique question. We've worked out the problem of mining on an Uranus sized planet. Any competent space crew, given training and mechanisms, could tackle Neptune. Saturn's something new. In a way, it's a compliment to us, Peters."

"A compliment, sir?" Peters grimaced and his gaze lifted to the magnificent crescent of Saturn as it steadily thickened upon the TV screen. "Well, sir," he said, "all I can say is: stars be praised I'm not the one who has to make the first descents!"

Derrick smiled as Peters shuddered. The tremendous size of the giant planets meant they had a crushing gravity, several times that of Earth; their thousands of miles deep atmospheres meant great compression of gases, so that only the highest of mountain ridges could be reached; their vast distances from the Sun meant they were cold almost beyond bearing. Gravitational forces, weight of atmosphere, and coldness: these things tried man and his machines to their uttermost. A limbless man—who could be fitted directly into a machine, and did not have to transmit his thoughts through arms and legs—had a great advantage in such conditions. Derrick felt his spirits rise.

"And, sir, there's another thing——"

Peters broke off to point at a light winking on the communications section of the control panel. Derrick leaned forward and switched on.

The voice of Arnold Quillan, until recently manager of the Uranus Station, now following Derrick in the supply ship on its way back Sunwards to Earth, soon to take command of the Saturn Project, came to them over the radio beam, slightly distorted but still typically dry and disillusioned.

"Glad to hear you're surviving the trip," it said doubtfully. "Don't forget I'm only thirty-six hours behind you. So-help-me, I'll ground you if you forget your promise and try anything spectacular—like making a descent—before I get there!"

Derrick exchanged glances with Peters. Something of the sort had been in his mind. Arnold's innate caution always seemed to be causing unnecessary delays.

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With the communication over, Derrick's eyes lifted glumly to the gorgeous-hued image now so swollen as to be partly off the TV screen. The descent would have served a double purpose. He would have gained first-hand information; and been free of the surreptitiously staring eyes of those physics people. However——

"Sir," said Peters, "isn't it about time you aligned ship for landing?"

"Yes." Derrick sighed heavily. While Peters secured himself to his gravity couch, he adjusted his own head-cradle, switched on the gravity-counterpoising magnets above his metal arms, moved the independent base to which he was clamped until he was facing the rocket tail of the ship and thus able to see control panel or TV screen merely by moving his eyes.

Suddenly, in this position with his back to the transparent nose of the ship, looking down on Peters, he had a curious impression of being on the ceiling.

The sensation passed as he concentrated. With a hand made weightless by the magnetic counterpoises, he cut the rockets. For an instant it seemed the ship leapt in the direction of Saturn and then all sensation of movement was gone. Peters's lank hair floated freely, stirred by the slight movement of the air circulation.

Derrick licked his lips. They were in free fall, he assured himself. But he could not shrug off the uncomfortable feeling that he was lying on his back, looking up at Peters—who was floating up there, on the ceiling.

He tried to force such thoughts from his mind. Ever since he had learned what the physics people on Saturn were doing, he had tried not to think of it. He was a cripple; his sole usefulness in Space was that he could endure a greater gravity pull than his fellows who depended on frail, human limbs. Gerald P. Mould had been probing at the enigma of gravity for years, using the Saturn system of moons as his proving ground. Everyone knew that he was getting closer and closer to success. A man on the ceiling would mean that he had made the wonderful discovery of an anti-gravity; that Derrick's curious superiority was over.

He would be no further use; he would be a derelict.

Grimly he reached for the lever that aimed the rear-pointing TV, unclamping it, moving it gently so that Saturn's thick crescent slid off the screen. The moving stars glared like a myriad eyes against the blackness. Sweat started from his skin as he located Titan on its course around its massive master.

One side of it shone, a thin flicker of light; but mostly it was a black hole in the stars. Derrick, face set, reached out to the automatic pilot. Switch over the speed control to the pre-set figures for Titan, so that they would approach Titan's mass of nearly two Earth moons at a final speed near relative zero. Cut in the gyroscopes so that the ship would align

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herself on the new TV objective, swinging round in a great arc in tenacious pursuit of the great, orbiting moon. Switch on the rockets, and . . .

And forget, forget the nightmare of an- anti-gravity device—the Damoclean sword hanging over his head—in the whine of the rockets, in the cruel red haze of renewed, and increasing braking, in the torque of the speeding ship as she skidded painfully into her new line of advance.

At length she was creeping up behind the growing ball of Titan. On manual he moved her out, his instruments telling him of the dual orbital motions given her by the two masses, Saturn and Titan. He radioed down to the Experimental Station while the tide of sunlight appeared to creep beside the ship over the darkened face of the moon.

They were expecting him, waiting to beam him down. With the ship under the remote control of the Station there was nothing to do except suffer the slight strains, and think. It was too much to hope that the Physics people would accept him right away as a man on a job. Probably they would want to inspect everything about him. A medical curio! Already they must have talked him over amongst themselves. He gritted his teeth, and worked his seat back to its normal place.

Like the wail of a banshee, a long way off, the rockets howled in the thin gases of Titan's surface. The jagged mountains and snow-choked valleys swayed briefly around the cabin. Momentarily there was darkness as the ship sank into the underground hangar and the great covers rumbled into place above him.

A spotlight fingered through the dark, located the outer hatch of the ship's airlock. The turntable below the landing pods revolved a little more than a half-turn. Derrick saw the lighted window behind which the spaceman responsible for his landing sat. The man lifted a hand in salutation and then leaned forward, directing up the adjustable, tubular gangway until its sucker edges gripped around the airlock hatchway.

Derrick glanced at Peters. A voice over the radio told them all was ready. Peters unclamped the double doors of the airlock.

Derrick knocked aside the base clamps that held him to the floor. Deft jerks of his stomach muscles turned him on one caterpillar track and ran him forward towards the lighted gangway.

Someone was coming up to meet him. Slender . . . Long, wavy, brownish hair. . . . A face as delicate as a woman's——. He jolted to a halt. Great Novas! Trousers, tunic blouse and all—this was a woman!

He licked his lips, then caught his breath in alarm as she looked up. It was three years since he had seen a woman. Their eyes met.

"I'm Frances Baen," she said softly. She thrust out a slender white hand and smiled impulsively.

Suddenly her face went blank. She bit her underlip. And her widened

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eyes looked down furtively at his metal arms. "I'm sorry——" She drew back her hand and her fingers clenched and unclenched.

He swallowed hard. This was worse than he had imagined. "It's all right," he said curtly. "But please don't be upset. I take a little getting used to."

"Oh——it's not that——" Something in her eyes, as they turned up fearfully to his face, suggested to him that he was frowning. Her lips moved soundlessly.

He did have his eyes screwed up——. With an effort he relaxed. He forced a smile. "You——" he began. What did one say to young women on occasions like this? "You're one of Mould's associates, Miss Baen?"

"Not exactly——" Her impulsive smile brought beauty into her plain face. "I'm a kind of mixture of secretary and housekeeper. And I'm making a mess of welcoming you and . . ." She glanced sideways at Peters.

"My personal ord——" Derrick hesitated. "My companion," he said softly. "Peters."

He watched them shake hands. And he tried not to feel bitter. He could see that the action made her feel that the ice was broken now. But, as they started down the gangway, she glanced nervously down at his whirring caterpillar tracks, and her conversation faltered again.

She caught his brooding gaze upon her. For an instant she sucked in her underlip; then she was smiling. "There's a meal ready in the saloon. I do hope I've chosen things you both like. You must be ready for something tasty after shipboard rations. After you've eaten, I'll show you around so you'll begin to feel at home——" She broke off on a sudden note of anxiety.

But Derrick was already leaning back in his harness and taking the steps leading down to the main level of the spacious control room floor. He heard her feet patter after him, felt her presence between himself and the striding Peters. Titan's gravity was nearly a third of Earth's. Magnets in his caterpillars made him independent of such things, but ordinary humans seemed to walk easily enough. Arnold would find that a relief . . . after being on that tiny moon over Uranus.

How deserted this place seemed. Plenty of room for both projects. Must have been built for the double purpose. But it did echo the sounds they made with extraordinary clarity.

"Where is everyone?" he asked, as they sat around the table, helping themselves from the automatic waiters.

Frances Baen said: "Oh!" She paused to watch fascinated while he used some of the metal attachments of his arms to take a mouthful of tinned turkey, stuffing, and vegetables.

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Under her gaze the food turned tasteless in his mouth. It wouldn't have been so bad if she'd been a man; as a woman she represented one of the things he could no longer hope for: a wife. He looked at her resentfully.

"Oh!" she said. "Yes. . . . Er—— Gerald and most of the others here are all down on an inner moon——"

"A test?" He swallowed the unchewed food.

She nodded brightly. "Isn't it wonderful. Only Gerald could have done it, of course. People are all the more amazed when they see how comparatively young he is." She drew in her breath. "We're waiting for a message from him now. Wouldn't it be wonderful if we had to transmit a message back to Earth to say he'd done it, and had gone down into Saturn's atmosphere and come back up without being crushed?"

"It would," said Derrick.

She missed the irony in his voice in her enthusiasm. "Oh, I'm so proud of him——" She flashed Derrick a smile. "We're engaged to be married, you know. We would be if there was a clergyman here——. But I want to walk up to the altar in the good old way——."

She broke off as an orderly ran in through the door. Her eyes wide she stretched out her hand for the message form he brought.

She chewed her lip as she read. Derrick watched her. She wanted to walk up to the altar in the good old way—— To walk! She would want to feel strong human arms around her——

"Is something wrong, Miss?" asked Peters.

Derrick started as she looked up. How frightened she was! How her hand trembled!

"Yes," she murmured tensely. "Gerald went down from the moon in a small ship with pre-set automatic reactions. It is still in its place, standing on its rockets, at a height over the surface that gives him three Earth gravities to endure. On personal test in Space, the doctor said he was quite safe operating simple controls——and he told me himself he didn't have too much difficulty operating simple controls at an acceleration equivalent to three gravities. So it isn't that." Her trembling hands rose to her mouth. She mumbled. "Something must have gone wrong with his anti-gravity mechanism!" Her bosom rose and fell and agony glared out of her eyes. "Dear fool that he was. He would know there was danger, and would make the drop alone. Oh-h!" she shuddered and buried her face in her hands. Her shoulders shook.

Derrick rinsed the metal tools of his metal arms and rested them on the edge of the table. Space was cruel. Seldom was there a second chance out here in the vast, inimical macrocosm.

From the back of his mind a small, hopeful voice told him that Gerald P. Mould was doomed——that the anti-gravity project would be buried

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with him. He chuckled. To drown the sound, he cleared his throat. "What are they planning to do to lift him up?"

"Planning to do?" She looked up at him frantically. "What can they do?" She combed her hair back with her fingers. "Oh! if I could only have been down there——that would be something." She stared resentfully at Derrick.

He frowned at her tear-stained face. It was not his fault she had stayed to meet him. Her gaze dropped. She looked very small and helpless. Symbolic of mankind in Space, he thought.

But then he saw her expression was changing. "You!" She pointed at him and her eyes turned up from looking at his arms. "You could save him!"

"Me?" The small voice urged him not to be a fool; not to cut his own throat. But the appeal in her eyes was stronger than the voice in his mind. He turned sharply to Peters. "Well, what are we waiting for?"

"Nothing, sir!" Peters's knife and fork clattered on the table.

Their footfalls echoed through the bare corridors and deserted rooms of the Station.

"They won't be able to beam you down on to the sub-station," warned the duty spaceman who had brought the ship on to Titan. "You'll have to work her round yourself." He explained the relative position of the inner moon used by the project. "Not far from the rings," he said warningly. "Don't forget to allow for their attraction as you get in behind the sub-station moon, or you'll miss it."

Blast off strains held them all silent at first but as soon as they were slipping back behind Titan, he could hear Peters questioning Frances Baen. Though he tried to busy himself over the course he had to set to the exclusion of all else, he could not entirely escape hearing what they said.

Frances was calm enough now. The figures and lines of his course graphs faded from his mind. The change in her was astounding. Was it his reputation that inspired such child-like confidence in him?

He stared down and to the left, at Saturn. Mighty Saturn. Nine times wider than the disc of Earth. One-twelfth the width of the Sun itself. Enough mass to make nearly 95 Earths. By comparison Uranus seemed puny, though it, too, was a gas-giant like Saturn; unlike Earth.

The talk between the others prompted his thoughts. Uranus was only as wide as four Earths; its mass would only make some $14\frac{1}{2}$ Earths. Peters was amazed at the figures of comparative gravities. Earth gravitational attraction being taken as a unit, then Uranus had a gravitational attraction of only about 2, Saturn only about $3\frac{1}{4}$. But that——Frances explained patiently—was not the whole story. These figures were for the

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upper layer of the atmospheres of each of the planets.

And the atmosphere of Saturn was estimated at 16,000 miles in depth. "Gravity," she said, as though she was quoting something her Gerald had told her, "depends first upon the size of an astronomical body and second upon the distance from the gravitational centre of that body. The very size of Saturn both increases *and* decreases gravitational sensation for us humans."

But not as one descended into the depths of the atmosphere——when that atmosphere was 16,000 miles deep——as he would have to do, thought Derrick.

He stared at Saturn and the others' talk faded from his attention. A colossal disc, nearly half in sunlight. Burnished gold in the thick, central region changing through the varying hues of the lateral, atmospheric belts caused by the effects of rapid rotation, to a deep, glowing, emerald green at the poles. Magnificent——and deadly. Girdled, from his present angle of view, with a shining line of light like a silver arrow upon a crossbow.

"If anyone can do it, he can," Peters was saying.

Derrick started. He bent over his graphs. It was not like Peters to take the slightest interest in planetary data.

He forgot their talk, then, in his concentration. Distances in space were deceptive. The ship had enough power to escape from the very depths of Saturn's atmosphere, but he wanted to put her within easy landing range of this little moon, so that no manoeuvring would be necessary; only a straight drop down. Rather like landing a rocket 'plane on the deck of a moving boat in the midst of a gale of cross-winds.

He worked the ship down towards Saturn, letting the gravity help him as long as his graphs told him he dared. Then he was accelerating, coming up into an orbital course, on the track of the moon.

He glimpsed it at last, just when he thought he had missed it in the darkness. A thin rim of light, close enough for his purpose. It broadened swiftly—and then more slowly as he braked with the ship swung tail-foremost.

"You fool!" said the small voice. "You could have wasted hours just by making a mistake. No one could have blamed you. You've never been here before."

He looked around sharply. The voice was now so real and strong in his mind. Frances smiled at him, her eyes shining. "That was quite a feat in itself, Mr. Crocker!" she exclaimed.

Guilt held his tongue. She did not know what he had been thinking. He waved a metal arm in the direction of the computor at his side. "That did the hardest work; not I!" he said gruffly.

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At their slow speed relative to the tiny moon, it drew them into a curving motion around its lighted face. They saw the sub-station's concrete cover and two ships beside it appear to rise over the low horizon and, with the outer edge of the rings glaring bright above them, he worked down on a succession of blasts to a landing.

A big surface buggy tracked over to them, took them off by means of a telescopic ramp-tube and hurried them into the cavernous sub-station.

Derrick looked around as men hurried to meet them. This was more like the world he knew. Harsh, commercial in its own way, utility.

"Derrick Crocker?" asked a burly, middle-aged man.

Derrick nodded.

The man made as though to take Derrick's arm, but instead motioned him urgently forward. "I'm Hemmett——Geoffrey Hemmett," he said as he strode rapidly towards the base of a reflecting telescope. "My father developed this antigrav you know," he said quickly. "But it killed him. Mould took over, and I think he'd worked up to where my father left off. He *would* make this test. I tried to stop him, but he was too excited, I think." He paused. "Oh, hello, Frances. Don't you worry. He's still down there. No cause for alarm yet." He looked back at Derrick. Again he made as though to help Derrick up into the bucket seat that had been lowered, ready for him.

Derrick half smiled at the man's perplexity. "You'll have to take the seat off."

"You'll be all right——if we do, I mean?"

"Yes," explained Derrick. "Magnets in these endless feet of mine."

"Oh!"

Derrick, swinging up into place within the giant-tube of the telescope, looked down at their white, upturned faces. All of them had confidence in him. It was good to feel he was needed.

"Not for long," said the small voice. "Get their friend up for them and before long no one will ever need you again."

He shook his head. With the girder tube of the telescope shutting him in, he adjusted the view-piece to his comfort.

Mould's ship was a sturdy-looking job. The government stuff was always good. Better than his own ship for a business like this. More mass and so not so fast in picking up acceleration; but tougher-skinned, better able to take strains.

It was perhaps a thousand miles above the plane of the rings. "Give the meddling fool enough time," suggested the small voice, "and he'll be drawn into them." Yes, it was likely that Mould, being more scientist than spaceman, would have forgotten to set his automats to counteract either that drag or the centrifugal force of his motion.

From here, through the telescope, Derrick could see the shadows of

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turbulences sweeping across the wind belts of the golden atmosphere. The ship seemed to be speeding overhead, its tail flame licking down. Seemed to be? Yes. . . . As he watched he realised that the truth was the ship did not move. Saturn rotated beyond it. The "rings" rotated below it.

Derrick glanced around his perch for a communicator. Locating it, he flicked the switch. "Hello, down there?"

"Yes?" Hemmett seemed to have been waiting.

Derrick said: "He's not moving in relation to us, is he?"

"No," said Hemmett. "No, I suppose not. He went straight down from here, so he'll have kept the motion of this moon. Hadn't thought of that. Does it help?"

"No," said Derrick. "Get me down."

"Why doesn't it help?" asked Frances anxiously as Derrick tracked off the telescope viewing platform.

He stopped, looking at her frightened eyes, her parted lips. He licked his lips. "I've no anti-grav device," he said shortly, and the small voice assured him he was doing the right thing. "Only speed can lift a space-ship in my experience. . . ." Confound her for looking so pathetic!

He turned abruptly to Hemmett and other men who had gathered together. "How long since he left here?"

"Er——" Hemmett glanced at his wristwatch. "Thirty-six hours, Earth time, or thereabouts——"

"What!" Derrick's metal claw seized Hemmett's arm.

Hemmett winced. Eyes wide in a suddenly flabby face, he stood very still.

Derrick glared at him. "You crazy scientists! Playing with fire——" he stormed.

They thought themselves very clever. They didn't see the danger. They probably thought of the gas-giants as pretty toys invented for their amusement. Serve them right if——

His eyes, turning disgustedly away, encountered Frances's. She was as white as a ghost. Serve her right, too——

Yet——

He heaved a sigh. "Don't you worry, Miss Baen. I'll drag him out, all right."

He spun himself around and, with Peters close behind, tracked towards the exit.

Hemmett called after him: "If there's anything we can do?"

"Do?" Derrick skidded to a halt. "You stay out of this——until after I've tried——"

All the way back to his ship he fumed. People playing at being space-

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men! Ought not to be allowed. Simple emergency precautions in Mould's ship would have saved all this. He suffered Peters's arms lifting him from the cradle of arms and legs, setting him within the globe of the ship's nerve centre in a smouldering silence. Humanity in space was shockingly fragile. A thousand disasters could mortify human flesh——

" Comfortable, sir? " asked Peters.

Derrick wriggled himself within the harness. A few creases in his skin would be agony later on. " Yes."

The rubber cushions encircling his lower half pressed in hard. Anti-gravity! Huh! G-precautions such as these cushions to prevent too much blood draining out of one's head were the only reality.

" That's fine," he said.

Peters nodded, hesitated. " Good luck, sir." Then he was closing the transparent top of the globe, clamping it, walking backwards into the ramp tube, closing the airlock hatches behind him.

Derrick worked his muscles. And the ship woke to life around him, as though a part of him. The instant he had the all clear, he fired the rockets. Pressure. Weight thrusting down at him. He joyed in it fiercely. This was his life.

The moon dwindled in the rear-pointing screen. Saturn swung across the sky as he turned ship. The moon loomed hugely at one side of him and was gone again. He knew without computation when to cut thrust.

Weightless, he rested in his straps, waiting. Occasionally he muscled the rockets into brief fury, correcting his slow, curving fall towards Saturn.

The planet grew to meet him, gigantic against the blackness, glowing, almost a three-quarter disc, majestic. The rings began to open out as he rose about them. He crossed the outermost edge and the countless, tiny, separate bodies that composed the rings each took on its own individuality. They flowed steadily below him.

Nothing to do now, but wait, wait for his ship to reach the first position planned in his mind. He rested coldly, alone. To those back on the moon, he would seem hard, inscrutable. But they did not understand—scarcely did they even begin to understand. Space was not their life.

Presently the outer ring was behind him, a river of curving light. Through the Cassini Division between the inner and outer rings, the stars watched him, unwinking, from the blackness of infinity.

Still he fell, waiting. Saturn filled the sky before him, glorious, terrible. The inner ring spread out to greet his passage above it. It flowed below him. He operated the automatic feeder, eating slowly to assist digestion, drinking copiously. The human body used its energies at a fantastic rate under the stresses of high gravity. Another twenty-four hours and

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Mould, if not already dead, would be a dehydrated corpse. Even now, if he still lived, could still feel bodily sensations, his thirst would be crueller even than the gravity strain.

The thinly spaced, glowing bodies of the Crape Ring, within the inner ring, peopled Space below him with a multitude of lights moving steadily over the remote stars of the cosmos.

Still he fell. The rings behind him were like vast, shining horseshoes. Only with difficulty could he locate the tiny light of the moon he had left, far beyond the outer rim. Saturn took on the appearance of coloured smoke erupting above a fire as his view of it began to be limited by his rapidly decreasing height.

Falling. . . .

He began to search the horizon for the needle of flame that was his quarry. But it was too soon. No longer dared he continue his free fall. The hours it had taken seemed as minutes as he began to brake. Shedding acceleration so close to a gas-giant dragged at each part of him, weighting the pit of his stomach, setting the thinning blood drumming in his ears in spite of the constricting agony of the G-suit.

Weight. . . . Unearthly weight. . . . The sensations of being in a lift that smashed up faster and faster and faster. Up, up. Even though Saturn still spread out inexorably below him. If it hadn't been for the urgency of his mission, he would never have risked blacking out——

Shadows played on the edge of his awareness. But he had to endure. Two lives hung upon his special ability now. Mould's——and his own. He could not keep his lips together. But he could clench his teeth and yell.

Slowly his straining heart found new reserves of strength. He came up from the depths of certain doom and peered over the ochre clouds of the horizon.

He was still falling, but his ship was winning its battle, was swinging up, giving the clouds below a rushing movement, as though he were the weight of a down-swinging pendulum.

The howl of the rockets beneath him in the tail was his own voice. Exultantly, his spirits rose, blotting out the irritation, the sweat, the strain——

There it was. A red pencil of flame against the stars. He edged his ship into better alignment with it, watching with narrowed eyes, rippling muscles tense and nervous as he worked the controls.

Saturn glowed below him like an unthinkable curtain of gold. Above, the rings were thin arcs of light in the blackness. Steadily he closed the gap, now almost standing on his tail, the fire of Mould's rocket a perpendicular flash low down, almost level with his chest.

He drew down his aiming device, sighting the glare of Mould's rocket-

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blast through it. Too far to the left: move the ship into a new slant so that it would slip to that side. Straighten. Test for elevation. Too high. By far too high. The rocket blast was a glare before him. He clicked a vizor into place. Time was running out. Ahead of him he could see the tide of night creeping across the face of Saturn. A glance at his chronometer told him of Mould's increasingly desperate plight. And hours must still pass before they were safe——before he could relieve the tremendous pressures on them both.

He decreased thrust and the reactions of his body, suddenly eased of strain, made it seem he rose. No visible change was apparent in the clouds below, racing interminably beneath into the curving line of shadow that was night. But the cone of fire of Mould's rocket leapt up through his sights. He restored blast and went dizzy with the renewed strains.

As his vision cleared he saw the glint of sunlight on the cabin top of the other rocket. What mystery did it hold? Perhaps Mould was already dead. Perhaps. . . . But what was the use of speculation?

He edged closer, closer. He slipped out the magnetic grapples from his ship. They had never been meant for this. The hull of the other ship shone like tarnished silver through the vizor. The long, incandescent fire of the rocket tail was too brilliant to think about.

He activated the grapples. Too far away and they would come back at him; too much power and they might bounce off the other's hull and never have a second chance. If he travelled too fast relative to his quarry they might tear him apart. No. These forces he used and fought against were not for the inexperienced——for the adolescents of space.

A light on his control panel glowed. One grapple home on that other hull. A second light. He panted with strain and excitement. A third. He waited. The hull around him vibrated with the clang of the fourth striking back at him. Failure. All wasted effort. He cut the power and pulled his nearest TV camera into line in time to watch Mould's ship appear to drift below him.

Work back again with rocket below him leaning like a spire, muscles strained and tired, nerves jumping. Lose his balance——and the ship would plunge into a spin. He might never rise out of that. Sweat trickling into his eyes. Blink it clear with heavy lids. Locate Mould's ship. Nearly in position. Now. Grapples swinging below, perhaps in the flame of his rockets at times. Wait. One light. Two. Three. . . . Four!

His breath sighed out of him, leaving him aching and spent. Rest. He held the ship steady. Must be ready for the mad rush that was now inevitable. As soon as he began to move Mould's ship, he must expect the automatic devices it contained to sense the change in gravity and cut out, leaving him with the dead weight just hanging below.

He opened the flow of current to the magnets as wide as it would go.

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And he began to lean his rocket over. To pull Mould straight up would be to increase the gravity for those unthinking automats in the other ship. They would increase blast to lift the ship——and would smash it into him or drag him into a spin that would kill him under these conditions.

Increase the leaning. Increase it. Over to forty-five degrees. That would do. Watch the other ship in the screen, watch for its reactions. They would be gathering sideways speed now, relative to the surface below. They would also be falling, but the orbital motion would reduce the gravity, if he did it right, so that, as they sank, the automatics he had to out-think would cut blast.

Step up the blast very, very gently. Dare not do so enough to counteract that shocking fall. Gently, gently. Ever so gently. The golden gleam slanting below, and the rings arcing above in strange unreality.

They would be gathering speed now. Still falling——as they must. But—— His heart almost burst as gigantic sparks trailed from the ship behind him. Soon he would be taking the weight of both ships.

Like an extinguished blow-lamp, the flame of Mould's rocket died. He had fooled the automat. His face was too strained to smile, but he cried within his mind for joy.

But it was not over yet. He could feel himself beginning to rise. That was not a real motion; his human feelings were playing tricks on him again. Actually the ships fell.

They fell more rapidly than before. He dared not risk his grapple lines snapping in a direct ascent. Had to reduce the gravitational drag upon him by gaining a greater orbital motion than that originally imparted to Mould's ship by the moon circling far out beyond those shining rings. Dared not accelerate too swiftly yet, or the apparent gravity caused by the motion would activate those automatic relays he had to outsmart.

Steadily did it. He sweated. Lips dried out, became parched. Impossible to get one's tongue out to lick them. Impossible to drink from the feeder. Eyes smarted. Human organs did not work too well in these conditions.

Steadily did it. The clouds rushing turbulent and massive below him seemed to well up, up to engulf him.

Steadily did it. He was closing the gap between fall and orbital velocity. Leaning still further now. Balanced on his single jet. Thankful that the weight of the other ship steadied him.

The clouds seemed almost to brush his underside. Time lost all meaning. The only reality was the increasing tension of his weary muscles.

Two motions relative to mighty Saturn. Down towards it; along over its surface, now flat as any other landscape below him.

Steadily. . . . Steadily. . . . Was that the scream of the atmosphere over the hull of his ship? It was. Thin and piercing, stabbing into his

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vitals. Surely his speed was now almost enough to risk lifting? No. And yet he felt sure that his apparent weight was increasing? Did he lift, perhaps?

A winking red light on the control panel caught his eye. He focussed on it, dull with strain and stress.

And suddenly every nerve in his body was quaking with terror. He had forgotten that Saturn's atmosphere contained a high percentage of ammonia. On the further out planets—Uranus and Neptune—this was frozen out of the atmospheres—— It was eating into the metal of his hulls. Thin metal by space standards. The outer hull must be already punctured by corrosion for that light to flicker.

He fought his panic. After all the hours he had worked for this moment, he was not going to fail. Bitterly he cursed the inexperience of fools.

Steadily. . . .

A roar and flash filled his being. His ship leapt around him. The sounds and light were gone. He held on to consciousness and his grip on the controls, dimly trying to reason through befuddled thoughts what had happened.

His muscles went on with their movements, seemingly without him. Presently he was well enough to look around.

Saturn was falling away.

At first he did not understand. Then his face, that was too strained to smile, twitched in a faint grimace. The battle was over. The atmosphere down there. . . . They had sunk perhaps ten miles into its 16,000 mile depths. . . . Friction had slowed them. He had forgotten to allow for that——The automat in the rocket below him had reacted in response to the extra weight. It had fired a short burst. That had lifted them clear of the gases. They were climbing towards the rings, very slowly working out up the hill of acceleration until they would be able to revolve as powerless and gravity free as a natural moon.

He pulled on the radio. " Hello . . ." he croaked feebly.

Arnold's frantic gasp filled his ears. " Derrick? "

" Yes," he managed to say, " you'll have to come and get us as soon as we are far enough out. I think I've had enough. . . ." He just managed to make the automatic pilot take over before he lost consciousness.

" Mr. Mould would like to see you," said Arnold. " If you feel up to it, that is."

" I'm all right now," said Derrick. He glanced across the comfortable quarters at the waiting Peters. " Bit sore, that's all."

While he was being fastened into his cradle of mechanical limbs none of them spoke. Arnold, walking at his side as he set off through the big,

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Titan station that was to be their home during the new project, presently cleared his throat. "Gravity's better here," he said, then glanced sideways at Derrick. "Though, I suppose you wouldn't have noticed. With your metal pins, I mean?"

"I suppose I wouldn't," said Derrick.

They went on in silence. Frances, Hemmett and Munro, the plump man from the Planetary Opencasts Board on Earth, were grouped around the door of another apartment.

Each looked curiously at Derrick as he tracked towards them with his metal arms hanging limp at his sides. They parted without a word for him to enter the room beyond.

He tracked in and stopped. Arnold frowned as they looked around.

"I'm up here," said a feeble, croaking voice.

Derrick tilted his head back. A man, evidently the doctor Derrick had refused to see, knelt on a platform slung from the ceiling. Beside it, lying on his back on the ceiling, was a man.

"My name's Mould," he whispered through cracked lips. "Gerald P. Mould. Mr. Crocker, I owe you my life——and also, I think, some kind of explanation. . . ."

"Suit yourself," said Derrick.

Mould's breath wheezed painfully in the silence that followed. "I do not understand your attitude," he said finally. "But I think I would like to tell you what happened. I got the ship in position and was quite all right, so I thought. I was trembling with excitement, I know, so I may not have been entirely clear-headed. I had fixed the anti-grav screeners around the cabin I was in, and I switched them on. It was a wonder I did not break my back as well as my right arm and some ribs." He grimaced painfully and tapped the plaster which encased his chest and arm.

Derrick licked his own cracked lips. This was fascinating. In spite of what it would do to him, it was fascinating. "What had gone wrong?" he asked.

Mould sighed. "I had not learned to control my screens properly. Instead of cancelling out the 3 gravities to which I was subjected, they added to them. They appear, from what Hemmett tells me, to have doubled them." He frowned. "We still know very little about gravity," he explained. "You see, supposing that some particles of matter attract other like particles, so that worlds are formed . . . then it is not illogical to suppose that there are other particles which repel the first kind with an equal power. Two sorts of matter, in fact. Like the opposite poles of a magnet . . . and yet unlike them. Do you follow me?"

"Yes. . . ."

"Hum. . . ." Mould passed his good hand gently over his pallid face.

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" Well, these screens work on a principle developed by Arthur Hemmett, Geoffrey's father. They have the effect of reversing the potential of atomic particles. It seems so obvious now that this will double the gravitational effect, that I cannot understand why I did not see it earlier.

" However, be that as it may. . . . You have done me the greatest service one man may do for another. Thank you."

" Is that all? " asked Derrick. " Do you mean that you've failed to make an anti-grav? "

" For the moment, yes." Mould grimaced painfully. " At the present, as you see, I am suffering from prolonged exposure to the screens. But the effect is lessening. As soon as I am on my feet again, I'll be trying again——"

" But not on Saturn! " interjected Arnold firmly. " I'll not have you endangering the lives of my staff like this."

" No. I plan to work from a base in space itself. I have an idea how to get hold of some of this—er—anti-matter. And a world made of the matter we know is no place to look for anything repelled by that very class of materials, now, is it? "

" No," said Derrick.

He looked at Arnold, who nodded. They went out through the others around the door.

As soon as they were alone, Derrick chuckled.

Arnold stared at him. " Now what? "

" That fellow Mould," grinned Derrick. " Up there on the ceiling. Can't help finding it funny. Do you think all scientists are a little mad, Arnold? "

" Perhaps," said Arnold grimly. " But I'll bet there's one spaceman at least who's crazier than the lot of them.

His lean face seemed even more gaunt than usual. " Whoever heard of trying to grapple a ship in space when it's triggered against the G of acceleration and when it's within a three G range of a gas-giant? "

" I see what you mean." Derrick folded his metal arms across his chest. " You did tell me not to make a descent before you got here. . . ." He chuckled drily. " But do you know there was only one living soul in the Saturnian System who told me I'd be a fool to do it? "

" No," said Arnold darkly, " Who was that? "

" Myself," said Derrick.

*E. R. James.*

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*There was, naturally, no life left on Mars, but the former inhabitants had left something behind which endured through eternity, was typically Martian, and utterly alien to Earthly senses.*

# PIPE AWAY, STRANGER

## By Francis G. Rayer

They heard it when their ears had ceased to ring from the concussion of the for'ad tubes. A thin, warbling note, it could have been the playing of reedy fairy pipes.

Raccety looked out through the open air lock, fingers restless as if still on the firing studs. One cheek twitched. He glanced back over one shoulder at the others.

"So this is it, men! First on Mars!"

They looked past him. A dusty sun was low in a weak blue sky. Undulating brown earth stretched from the crease the vessel had made, featureless as a frozen sea from ship to horizon. Thinly-scattered cacti tall as a man grew on every dune and hillock.

"You lost your tongues?" Raccety demanded.

One of the men at the back swore. "Expect us to dance and throw flowers?"

Raccety let it pass. They were ordinary chaps, picked only because of their technical qualifications, and no heroes. The one next him, tall, thin, and only half his age, touched his arm.

"What's that noise. . . .?"

The unease was in his voice Raccety looked at the dusty landscape and dull, long-spined cacti.

"Maybe wind, Starkey. Maybe—something else."

They looked at each other, listening. The thin, reedy piping rose and fell, wavering away, returning, a woody vibration unlike anything on Earth.

The big man at the back came along the air lock passage. "Were we paid to stand here?"

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" No, Joe."

Raccety stepped down on to the dusty ground. *So I'm the first man to set foot on Mars*, he thought. It was no thrill. Six weeks in a tin-can only fit to reach the moon could dull even the most ardent expectation.

The piping did not cease. They heard it as they unloaded a fortune in equipment and set up an observation post. They heard it as they unloaded the sand-wagon, preparing to explore. Raccety listened to it as he stood near the hastily erected hut, and heard it as he paced back through the brown dust. Joe stood by the ship, his sandy head bare, mopping his face.

" What the hell is it? " he asked.

Raccety knew what he meant. " Wind in the cactus. . . .? "

" You know it's not! "

" It may be."

Joe surveyed him pensively. " You're a good rocket-man, Raccety, but a damn bad liar."

Raccety scratched a long cheek with one finger. " Then perhaps *you'll* tell *me* what it is? "

They left it at that and loaded stores into the sand-wagon. The warbling piping was always there, sometimes muted, sometimes rising and quavering melodiously.

The six of them drove through the dotted cacti, Wilson, quiet, forty, at the wheel. Joe, bouncing up and down in the back with Berky and Clay, seemed to have found his tongue.

" Dry as dust," he said. " The whole planet's dry as dust. It's dry like dusty bones and dead leaves. It's old—*old*. It was drying up when Earth was a steaming wilderness."

He cocked his head around, staring at the prickly pillars of the eternal cacti. Raccety stood up in the front seat, holding the bar topping the windscreen. Far away to their left the ground seemed higher. He pointed it out to Wilson.

" Go that way."

They turned off through the never-ending prickly pillars, the sand-wagon swaying to the billows like a boat at sea.

" It's dead, too," Joe stated from the back seat. " We've come the very hell of a long time too late."

" That remains to be seen," Raccety said.

Starkey nodded. His face had a pale, creamy-white colour that spoke of fear. " I—I don't like it," he said.

Joe laughed, too loudly. " Am *I* laughing my head off at joy of being here? "

Starkey half turned, an arm on the seat back. " I—I mean it's so—so *strange*. This isn't Earth. Don't you see what that means? There, a

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desert was just a desert. The sand and dust were Earth sand and dust. The air we breathed was Earth air. This isn't. Nothing belongs to us, here."

Joe swore. The sound grated. "Shut up!" he said.

Wilson cleared his throat. "There's a lot in what the kid says."

"So what?"

They were silent. The sand-wagon rolled on across the brown dust and Raccety looked back through the marching cacti.

"Maybe that noise we hear *is* wind," Clay said from the back seat.

"Maybe," Raccety said. He watched the two long trails the vehicle's tracks made. The dust, a fine brown powder, settled slowly as they passed on. There was no wind.

"If it is the wind, that's why it seems all around us," Berky said eagerly. "It's blowing through these cacti." His voice rose a note. "I've heard the wind like that before, back on Earth. The wind can do funny things. . . ." His voice sank abruptly and he trailed off.

Raccety drew in his lips. The piping was no wind. It rose and fell, moaned and warbled.

"I—I've heard the wind like this, before—" Berky stated again, an edge to his voice.

Joe said something inaudible. "The hell you have! Where?"

The sand-wagon murmured up rising ground. The cacti fell away behind, and thinned a trifle ahead. The dust of their passing settled like brown smoke on a windless day. Raccety faced about once more.

A slender white minaret of indescribable beauty rose into view beyond the ridge. Other towers and pinnacles surrounded it, extending on and on in the valley bottom.

"A—a city," Starkey breathed.

Wilson halted the sand-wagon. They gazed down as upon some fabulous eastern city. Slender, lofty turrets pointed at the pale sky; row upon row of terraces ran between ornate buildings. Windows peeped from marble walls; carved parapets ran on and on, stately, fragile, beyond words beautiful. Long minutes passed, then Joe spoke.

"There's no one there."

They drove down into the city, slowing as they reached the first buildings. Alabaster walls reached above them, creamy and carved. Raccety lowered his eyes. Fine brown dust lay through the streets. Nothing showed how deep it might be.

"They're all dead," Joe said, "were dead before we were born."

They halted the sand-wagon and got out. Terraces rose level upon level. A thousand doors stood open; a thousand empty windows looked down upon them. Raccety listened to the piping.

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Joe released an oath. "Call this a proper reception? Call this right when we come so damn far?" He stuck his hands in his belt, scowling round at the silent buildings. "Hey, you damn Martians! Ain't you coming out?"

The shout faded in diminishing echoes. Starkey put a hand on the other's arm.

"Don't——"

Joe snarled. "Don't! The hell why not?"

"It's like—like shouting in a church."

Joe laughed off key and spat in the brown dust. "I'll do more than shout! I'll waken 'em!" His right hand went to his belt and rose with a weapon that was only to have been used in essential defence. "I'll show 'em!" he said.

The hand gun spat and kicked. Bolts shot down the street, and through windows and doors. A pinnacle tumbled in a sudden mumble of stone. Silence came and Raccety drew his gaze from the settling dust.

"Put it away, Joe. We're all nervy enough."

Muttering, Joe replaced the weapon. "Nothing but damned piping," he said defensively.

They searched until nightfall and found no living thing. The halls and rooms were empty of all but the most durable relics of an alien culture.

Raccety stood in the silence and knew that they would find no one. The builders of the great city were long gone. The warbling, reedy piping followed them wherever they went. He saw the strain growing on his companions' faces. When they spoke loudly, their voices echoed in the stone rooms. When one whispered, each looked at the others as if suddenly afraid.

Joe halted in the middle of a mosaic floor where green and gold made a strange design.

"All dead," he said. "All gone. We're boss, now. Let's celebrate."

The others looked at him. "Celebrate—?"

"That's what I said! This dry-as-dust, museum of a planet owes us at least that!"

Starkey shuffled uneasily. "You only want to make a noise, Joe, so you won't hear the piping. You want to forget about the millions who built this place—you're afraid, like the lot of us."

Joe scowled at him. "So I'm afraid, kid. So what? I've been afraid before, and lived to tell of it." He laughed. Too loud, the sound echoed, the laugh of a man unsure of himself. "What d'you think was in that box I smuggled in and guarded more carefully than Clay here guards his test-tubes and things!"

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He strode to the door, the beam of his hand-lamp playing ahead. The place echoed to his steel-shod boots, then was still.

Still, Raccety thought, but not silent. There had never been silence—only stillness. Behind the stillness was the piping, warbling on and on, rising as if in triumph, falling as if in sorrow. Sometimes it was very low, sometimes loud. But it had never ceased.

"Let's get back to the ship," Starkey said abruptly.

Wilson, Berky, and Clay exchanged glances, and Wilson nodded. "We should be in the ship now it's dark."

He looked round, shining his lamp along the walls. The empty black of windows and doors looked back at them. Clay moved. His boots sounded loud on the stone.

"Yes, let's go back," he said.

Light shone in a doorway and Joe came, carrying an armful of bottles. He set them down upon the mosaic.

"What better than that the living should drink to the dead," he said, and raised an opened bottle. "To our absent hosts."

No one laughed. He drank again and opened the other bottles. "I know it as a fact that there's not a teetotaler among you," he said.

Raccety watched him. "That bottle in your hand wasn't the first you opened, Joe."

Joe drank and wiped his mouth on the back of a hand. "So what?"

Berky crossed to him. "I feel like a drink——"

Joe nodded encouragement. "Help yourself. That's what it's for."

Raccety left them. He stood alone in an outer doorway. The night was windless. No air cooled his face and the two small moons sat like coloured pebbles in a featureless sky. The piping rose and fell all around him. Away behind, echoing, he heard Joe's laugh, followed by voices. Raccety shrugged. The stillness came back. He listened, striving to locate the source of the piping. It seemed above, below, and all around, of the very air itself. He shivered, going out upon the balcony. They were a long way from home. Yes, a long way, he thought. Never before had men been so far from home.

A snatch of song, men's voices in disharmony, came. Raccety hesitated. He needed a drink.

Came a step behind him, and Starkey, his thin young face carrying an odd expression.

"It's all wrong!" he said.

Raccety did not like the note in the other's voice. "Wrong? How, son?" he asked quietly.

Starkey shone his lamp around. His eyes were wide as those of a woman near hysteria. "Everything! *Us*! *They're* getting drunk and crying to go home. We're losing our nerve. We've come this far—and

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are too scared to stay! We didn't expect a band and red-carpet reception, but——"

Raccety pressed his shoulder. "But nothing, son. Keep your head. It's strange here—it's *alien*. It's nothing to do with Earth. But don't worry. We're all right."

Starkey's lips twitched. "There's that damned piping! What is it? Where does it come from?"

He looked around as if trapped, white cheeks drawn in, eyes reflecting the light. A roar of laughter echoed through the halls, followed by the sound of breaking glass.

"Hear that?" he said. "Joe's getting drunk because he's *afraid*. Did you ever know Joe afraid before? Worse——*he doesn't know what he's afraid of*. . . ."

He turned on one heel. Raccety watched his light bob from view. From the distance a bull-like voice began to roar.

"Come out, you damned Martians! We want to know what we're up against!" Something crashed. "I'll break your damn houses down, if I got to——"

The voice ceased and Raccety expelled his breath. Yes, Joe didn't know what he was afraid of. But he *was* afraid——in a blue funk of blustering terror. And behind the noise and the quietness there was always the piping, going on and on, a river of unending sound eternal as the dusty sand dunes.

Steps ran down into darkness on his right, and on impulse he descended. Rooms and halls lay below, almost filled with brown dust that had crept for uncounted ages through outer windows and doors. After an hour's exploration Raccety saw that his initial guess had been correct. The brown dust had descended into the valley. The sand-wagon had churned along streets filled to a height of many stories. Ah! but the city was old, he thought. Old. *Old.*

Somewhere above, a voice called his name. He answered, and Starkey slithered down into the dust-choked room.

"They're——taking the ship back," he said.

Raccety's pulse-beat quickened. "Impossible!"

"It's true!" A nervous hand seized his arm. "Joe suggested it. Wilson wouldn't hear of it. Berky thought it a good idea. They had a fight. They didn't know I was watching. Clay seemed undecided. 'You'll wait for the others?' he said. Joe wouldn't agree. 'To hell with the pair of them!' he said. 'I'm looking after myself. They must do the same.'"

"How long ago was that?"

"Half hour. Perhaps more. I didn't know where you'd gone."

"Why did you come after me?"

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"Because I —I didn't want you left here. And they can't take the ship up without you——"

*They can try,* Raccety thought. *Men that scared can try anything!*

He turned Starkey round. "Thanks, son. Now run for it. I'll follow."

He did so, slowly. Thirty minutes were too long, he thought. Joe and the others could have loaded into the sand-wagon in five. Starkey had overlooked that.

He urged himself on over the loose dust, drifted in some places in sloping heaps from roof to floor. After a few minutes he knew that he had mistaken his direction, and was descending more deeply into the buried city. He sought a way back through the silted rooms, made an error, and found himself at a lower level than before.

Strange patterns decorated the walls, shining green, gold and silver under the beam of his lamp. Nothing showed what manner of beings had once lived there. He wondered if loneliness had encroached a little at a time, or if some great catastrophe had emptied the city. No one would ever know.

He emerged into an inner room, and halted. A great machine stood there. Crystal bars of many colours danced with wavering inner light. Many discs larger than a man could span rotated smoothly, each pierced with irregularly-spaced holes. Amid the centre of the whole a globe burned faintly blue.

Dumbfounded, Raccety stared. The wavering hues corresponded oddly with the piping that came and went in his ears . . . no, in his brain itself, he realised. The piping had not been *sound. . .*

Only after a very long time did he move. His throat was tight, as with regret at something immeasurably sad, yet unchangeable.

Stumbling, he searched for the way he had come, and at last heard a voice calling his name hysterically. Starkey emerged into the chamber where the empty bottles still lay, panic in his eyes.

"They've taken the sand-wagon——"

They went out on the balcony. The night was still, but not silent. It had never been silent, Raccety thought.

"How long since they took it?" he asked.

"It was gone when I came up from finding you."

"I see."

The lip of the valley was just visible against the sky. Beyond it was at least two miles of brown dust.

"They—they won't try to take her up," Starkey breathed.

Raccety was silent. Earth was man's to explore and to own, even to the nethermost corner, he thought. Mars was not man's. Man was an interloper. A stranger, out of his environment.

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" T-they won't try to take her up," Starkey repeated, his voice a tone higher and containing no note of hope.

" I fear they may," Raccety said quietly.

He listened to the wavering piping. Once had been beings who had loved it; now was only the stillness, and a half-dozen Earthmen who were *alien to Mars*. . . .

One of the moons had set. Abruptly, from beyond the rim of the valley, a rocket trail burned heavenwards. His breathing stilled, Raccety watched. The rocket trail wavered, staggering. It hung, then dropped from sight beyond the rim of the valley. Seconds passed and the earth shook. Blue flickered momentarily beyond the horizon. The air vibrated and somewhere carved stone rattled, falling.

" They should never have tried to take her up," Starkey whispered.

Raccety stood listening to the piping. It wavered on and on, never ceasing. It was all around, as if suspended between earth and sky. Reed-like, woody, never harmonising, it fluted on.

" No, they shouldn't have tried," he said.

He wondered to what manner of being the piping had been as music, and what manner of being had played with the great instrument below. . . .

*Francis G. Rayer.*

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# The Literary Line-Up

Commencing in the August issue is the first instalment of a new three-part serial entitled *Wild Talent* by popular American writer Wilson Tucker. The book edition was published in USA by Rinehart and Co., this year and brought most enthusiastic reviews from many quarters, almost all of them stating this was by far Tucker's best novel to date. Like the reviewers we are more than enthusiastic about the author's mutant character Paul Breen, whose only departure from normalcy is a latent power of telepathy. To fully appreciate just how Tucker turns this simple idea into an outstanding novel (published for the first time in magazine form), means making sure of your copies of *New Worlds*.

Overshadowed by the serial but nevertheless almost as outstanding is a new Robert Sheckley story (another prominent American author who has rapidly risen to the forefront of fantasy writing), plus excellent stories by our own favourites Lan Wright, E. R. James, Peter Hawkins, Francis G. Rayer and new writer David Gardner.

May ratings were:

| | | |
|---|---|---|
| 1. | Takeoff (Part II) - - - - - | Cyril Kornbluth. |
| 2. | Walk Into My Parlour - - - - | Alan Barclay. |
| 3. | Zoological Specimen - - - - | A. Bertram Chandler |
| 4. | The Gamble - - - - - - | Jonathan Burke |
| 5. | Space Capsule - - - - - | E. R. James |

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*When the Moon is finally reached, one of the most intriguing questions will be answered—what is on the Moon's other side? And supposing there is a wrecked alien spaceship there—with an inhabitant?*

# SHIP FROM THE STARS

## By Peter Hawkins

Illustrated by HUTCHINGS

Steve Quinton picked up the telephone receiver angrily, his sharp action cutting off the contented purr of the buzzer. *Why*, he thought, *of the forty-six people I have to direct, does it have to be Berg who finds it? That little runt of a geologist who just gets under anybody's skin gets the best find in all Darkside exploration to date. . . .*

There was mush in the headphone pressed against his ear, a sound like the sea hissing on a shingly beach back on Earth, but no indication that Berg had come through to the Lunapolis receiver on the radio link between his three man exploration rocket and his base. A few preliminary crackles announced Berg's break through, nearly a minute late. Not too bad for him and more than likely his tardiness on this occasion was not due to his desire to make his influence felt.

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"Hello, Quinton. You there?" demanded his voice, his self-control not quite keeping within bounds the tremendous elation he felt over his discovery.

"I'm here," replied Quinton.

"Good. I'm glad, but look, although you're busy why did you have

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to send out Valmai Cassiday to me to work on the alien ship? I've no objection to the woman, in fact she's distinctly ornamental and although we've got a live alien we shall *have* to study, for goodness' sake couldn't you have sent two or three men with a knowledge of engineering?"

"If I could have done I would, only . . ."

"Look here," snapped Berg, "I'm not exaggerating when I say that this is the biggest find we shall have for a long time. One alien ship, admittedly wrecked, complete with a live alien aboard. And the best you can do is send me a female biologist. . . ."

"Have you called me up to moan about things in general?"

"If you consider giving insufficient help when help is needed is a moan, yes."

"Pity you don't have to account for the way the funds of the organisation are spent. Val Cassiday was the only person available to send at the time. Five more people will be on their way in a couple of hours. I shall be there myself within twenty four hours and so will all who can be spared of the rest of the staff. Even if . . ."

"But, Quinton, hasn't it penetrated your skull that there's the wreck of a spaceship out here on Darkside, one which has certainly come a long way and furthermore one of the crew is still aboard and alive? Can't you see . . ."

"Yes. I can. I also know that work which has been going on, in some cases for months, cannot be halted or abandoned because something which is apparently more interesting comes to light," snapped Quinton.

"'Apparently more interesting,'" mimicked Berg, his voice rising a tone or two. "A ship, maybe from the stars . . ."

"Listen, Berg, your only beef is lack of staff and inadequate equipment. That's true throughout the organisation and you know I can't rectify it. Taxpayers aren't awfully interested in selenology . . ."

"This should awaken their interest if you've told Earth about it."

"I have. And to satisfy your own curiosity I've told them you discovered the ship. Is that sufficient ego boost for you?"

"No need to get personal," replied Berg. Quinton could picture him as the words he was most interested in hearing crackled out of the radio aboard the exploration ship. There was an indication of complete self-satisfaction in his smooth voice as he replied to Quinton's insult; there would be a smile on his bland, olive face with the astonishingly red cheeks; his small, brown eyes would be puckered at the corners and his hands would be clasping and unclasping slowly, almost as if he were trying to gain a physical grip on his mental elation. The geologist would also have derived additional satisfaction from the knowledge that he had prodded his senior into making an observation which had its roots in annoyance.

Quinton forced himself to keep calm.

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"Has Val arrived yet?"

"You mean Miss Cassiday? Not yet; she was on to me immediately before I called you. That's why I was late. She should be landing any minute now."

"Uh huh. Anything else you want to say?"

"Not at the moment, other than you should try for greater appropriations from the government. . . ."

"Berg, I know you very much want to become head of the station when my term is up. If you're appointed I wish you luck in your search for more money. Now, what are you doing about this ship? Have your men taken samples of the hull? Are drawings being prepared and photographs taken?"

"Yes. Everything three men can do with the equipment we have aboard the ship is being done."

"Right." Quinton knew he would have no cause for complaint there; Berg, with his many personal faults, was an efficient organiser and could be relied upon, once he got his teeth into a job, to do it very thoroughly.

"Miss Cassiday's ship is just landing, so I'd better sign off. Get here as soon as you can, won't you? Goodbye."

"Goodbye."

Quinton replaced the receiver in the rest, eyes fixing themselves on the only picture on the bare, cold, cream-distempered wall. The clear, clean, almost photographic artist's conception of the still-unfinished Lunapolis, with launching sites, airtight tractors, overhead cables, workshops, factories and dwelling domes provided no answer to the query which snapped at him, a product of Berg's last words.

The geologist was ultra-confident. He sailed into any problem, known or unknown in content, and came out, smiling, with the answer. He'd never, in his whole life, asked for someone to, 'Get here as soon as you can.' Berg had found something he disliked and perhaps even feared. Quinton dismissed the matter from his mind and dragged a file out of his pending tray. As he opened the buff cover the phone bell rang again. He picked up the receiver.

"Quinton here," he grunted, fingers turning over the first few typewritten pages of the file, realising from the seashore sound in his ear that this was another call from outside Lunapolis.

"Hello, Steve."

"Why, Val! What's up?"

"Maybe an awful lot, Steve. Can't you get out here immediately?"

"I'd rather not. You know the amount of routine work which piles up. . . ."

"I do, Steve." Sympathy warmed her voice. As he had done only a

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minute or two ago with Berg he pictured Val sitting at the radio in the exploration ship, her red hair, cut short to prevent the ends catching in the fastenings of a space helmet and tinged blue by the fluorescents, her forehead wrinkled with the little frown which always went with that sympathetic tone of voice. She would hardly have had time to remove her suit.

"You remember Berg mentioned there was an alien aboard the ship?"

"Of course." Quinton allowed a tinge of asperity to creep into his voice

"Don't snap, Steve, please. This may be serious." The words came in a tone which seemed to indicate Val was frowning still, but for a different reason. "I'm going to be cautious," she continued. "There are two possibilities. One is that there is no alien being; the other is that it's vanished."

"Now, Val . . ."

"Let me finish, Steve. Berg is a queer individual, but he wouldn't invent an alien being unless he was right off the beam. He's not; when I entered the ship he was as happy as a lark and he doesn't like me around anyway. Then there was a call from the other two men who were out at the ship. They reported the beast had vanished and naturally they were as scared as the dickens. Berg grabbed three guns and a whole heap of ammunition and told me to call you up and get you out here as soon as possible while he went searching for the beast. Are you coming?"

Quinton closed the file and replaced it in the pending tray.

"I'll be out as soon as I can. Do you remember if there were any ships available?"

"There were two solo jobs. That's all."

"One of those will have to be good enough. See you in about five hours, Val. Look after yourself, won't you."

"I'm not leaving the ship. Those are Berg's orders and he's my senior. Furthermore this is one occasion when I'm obeying his instructions." She chuckled.

"Wise girl. Goodbye."

With Val's farewell hardly out of the receiver Quinton snapped down the rest on the instrument and dialled the hangars. He stated his wants briefly; in a matter of minutes he climbed into his spacesuit and walked out of his office into the Lunar night. Overhead the stars shone brilliantly in patterns long familiar to him from years of observation, some of them partly obscured by the high walls of the crater, its ragged rim touched with the gold of the rising sun, in which the embryo Lunapolis rested. From the hangars a solo rocket motor flared out a jet of orange flame astern; his ship being tested.

He broke into a trot, receiving the mechanics' verbal O.K's through the radio in his helmet. He climbed aboard the ship, mnemonic pattern of

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" at-rest " meter readings and safety-checks running through his mind. As the last item flickered away Quinton pressed the switch which set up a warning whistle in all radios indicating a take-off was twenty seconds away.

As the second hand covered the last division on the clock dial Quinton pressed the firing keys. The little ship darted up over the rim of the crater, brilliant sunlight flashing through the perspex dome and momentarily blinding Quinton. Carefully he took his bearings and set course for Berg's ship.

The Lunar landscape, mountains to starboard flaunting gold-tipped peaks against the black, star-dotted sky, flashed rapidly past, only the occasional peak or crater rim amid the pumice-dust sea below and visible by reason of a projection of rock sufficiently high to catch a vagrant ray of sunlight, indicated there was a world beneath the ship. Quinton checked his bearings constantly, correcting the ship's course twice before sighting the two silver vessels, one much larger than the other, resting on a tongue of rock projecting from the main massif of the gold-tipped mountains. He dropped his vessel into a steep dive, landing it smoothly and easily between the other two. As he left the safety of the ship he caught sight of a thermite flare suddenly ignited against the intense blackness of the mountains. Almost immediately a second flare burst out.

" Hello, Steve," whispered the microphone beside his ear.

" Hello, Val. What's happening? "

" You saw those flares just now? "

" Yes. What do they mean? "

" Berg saw you come in. He wants both of us to come up and look at the ship. He's sent down his two men to act as guides while he stays at the alien ship. I'll be out to join you in a couple of minutes."

Quinton acknowedged her remarks, striding towards the largest ship with great, loping steps.

The outer door of the airlock opened as he reached Berg's ship and Val stepped out, floating down to the rock surface beside Quinton. They exchanged greetings and loped off in the direction of the flares. A third flare, lower down than the previous two corrected their direction slightly, bringing them to a phosphorescent arrow crudely painted on an upraised boulder. By straining his eyes Quinton picked out another arrow thirty yards away.

" Come on, Val," he said. " Berg's made things very easy for us. . . ."

" You're on your way, Quinton? " asked Berg's voice, faint and hollow in the headphones.

" We've just found an arrow . . ."

" Good. The men are coming down to you, but even with their help

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you'll find the going pretty rough."

Eyes fixed on what seemed to be an easy way to the next phosphorescent patch, Quinton loped on, Val's heavy breathing in the headphones confirming she was still following him. The ground became more broken and uneven, needle-like projections of rock springing up out of the darkness like forests of stone conjured from nothingness by a sorcerer who moulded natural forces into solid, nightmare shapes. Some hung over the path Quinton had picked out, razor-sharp and immovable with explosives. One false move could easily have meant a smashed helmet, and a smashed helmet invariably meant death on Luna.

"Morgan, Hensler," rapped Berg's voice, "have you picked them up yet?"

"Not yet," replied one of them.

"Oh. Morgan—you come back here; Hensler, try and find them."

"What's the trouble?" asked one of the men.

"The beast's come back . . ."

"Berg," Val's voice broke into the conversation, "how far is the alien vessel from our ships?"

"No more than ten minutes, but . . ."

"All right, Berg," interposed Quinton. "I've just seen Hensler. He's coming towards us now."

With something like relief Quinton stepped out towards Hensler, stealing a glance behind him to see how far astern was Val. She struggled through the rocks some twenty feet below, eventually projecting herself upwards and landing a few yards away from Hensler.

"We've got to crawl the last bit," he informed. "It's dangerous, so watch your helmets." He led Quinton and Val to a spot which looked even blacker than the surroundings; on bended knees, through a ragged series of projections from the roof of the overhang, a couple of distant stars were visible.

Heads down and tucked well in against the chest to guard the fragile helmets against the probing rocks, Quinton and Val crawled along behind Hensler, muscles screaming protest against their constant misuse. Eventually, panting, longing to massage their sore muscles, the three of them stood upright facing an immense curve of silvery metal.

"That's it," said Hensler.

"Where's Berg?" asked Quinton.

"He'll be up for'ard, where the beast is. We assume it's for'ard anyway, on account of the fact that's the end which is crushed."

"I see."

Quinton looked round slowly, studying the rocky area in which the alien ship had crashed. The actual spot where the vessel had dived into the rock seemed as if it might be slightly less rough, beneath the pile of

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telescoped metal, than most of the surrounding terrain. If that were so it tended to indicate that the ship possessed a guiding, although not a controlling hand, at the time of impact.

" Berg, we're here. If you don't want Morgan and Hensler for a few minutes I'd like them to bring up the two solo ships. Having them up here will ease matters a great deal for us."

" Yes," agreed Berg slowly. " I'd considered the ground too broken to make a safe landing even in a solo ship."

" It won't be easy. Morgan, Hensler, get down there and bring up the two solo ships. Come on Val, let's go and look at this beast."

There was about forty feet of ship piled against the broken rocks. The silvery metal of which the hull was composed glistened very faintly in the light reflected from the high mountain tops. There were no windows in the unbroken portion, nor was there any sign of propellant tubes astern—that was assuming once more the vessel had dived nose-first at the Lunar surface. Where the ship had hit ground the metal had folded out like a thick, viscous liquid, a tribute both to the strength of the metal and to the force with which the ship had crashed. A few feet above one of the folds of the metal a fracture broke the surface like a black, jagged scar; as Quinton approached it Morgan dropped out of the black cavity. They exchanged greetings and Morgan loped off to join Hensler.

Once more the phosphorescent arrow marks indicated the way Quinton and Val would have to go; in silence they followed the blobs of radio-activity eventually locating Berg staring into what appeared to be a small hole in a metal wall. A hand lamp illuminated the dark corridor with a minimum of light; the geologist had erected a framework of metal which supported another lamp, the beam from which he directed through another hole.

" What's happening, Berg? We're here, you know," announced Quinton.

Berg removed his eye from the hole in the wall.

" Do you want to take a look? "

He moved away from the peephole and allowed Quinton to take his place. At first the light reflected from the silvery walls dazzled Quinton while his eyes re-adjusted themselves to cope with the great increase in illumination. Gradually details began to take shape; the room was a cube, bare and austere, without furniture and with no sign of decoration on any of the walls. The corners, where floor and ceiling met walls, were rounded; nowhere did there seem to be any indication of an entrance.

The beast lay, apparently pulled by gravity, in the lowest corner of the room. It was formless, looking more like a pool of the blackest ink in a tilted bottle than a being with sufficient intelligence to have some influence

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in piloting a spaceship. While Quinton watched the dull black surface rippled like a greasy, ebony sea and subsided once more into its previous placid state. He withdrew his head from the hole and told Val to take a look.

"Berg, the situation of this beast makes me feel uneasy."

The geologist's face, paler than its usual yellow beneath the helmet, wore a worried expression.

"I thought you wouldn't like it," he agreed.

"There seems to be no way out of the chamber," observed Quinton. "In view of that I think the beast may be one of three things . . ."

"Three?" interrupted Berg, startled. "I'd thought of a captured criminal or a lunatic, but the third . . ."

"The third is the nastiest possibility of the lot, and the most likely one. This animal, beast or whatever it is, is more than likely something bottled up by a race who didn't want it and got rid of it . . ."

"I see," murmured Berg. "Bottled up—in a similar fashion to the way Solomon bottled up the djinni, eh?"

"A good comparison," admitted Quinton.

"What are we going to do with it? Remember it disappeared somewhere and came back."

"I don't know. We know so very little about it. It can survive, and has survived a terrific landing; it can live in a vacuum; this chamber, assuming my theory is correct, is no prison to it. It can wander wherever it fancies. . . ."

"I don't agree with the last statement," interrupted Val. She turned to face them, a worried expression on her face. "If it could wander wherever it fancies it wouldn't be in this wrecked spaceship. Furthermore it wouldn't return to this spot. . . ."

"I see your point, Val," agreed Quinton. "Just about everything we've got yet is circumstancial evidence which can be interpreted several ways." He paused. "What's this metal, Berg?" He rapped the wall of the corridor with metal-gloved knuckles.

"I've no idea other than that it's an alloy and it's not homogeneous. There seem to be fine fibres or wires running through it at regular intervals. They could be part of the ship's heating system, cooling system, communications or lighting—anything. Until we get the others here . . ."

"I know. Some should be here before long. Let's get outside and do some thinking. Give this a little rest; maybe when the novelty's worn off a little we shall be able to see the important facts."

Quinton led them out of the ship, trying to force all his wild notions of a few moments before out of his head and reduce them to, or deal only with, bare facts. The facts were—there was a ship from somewhere and—

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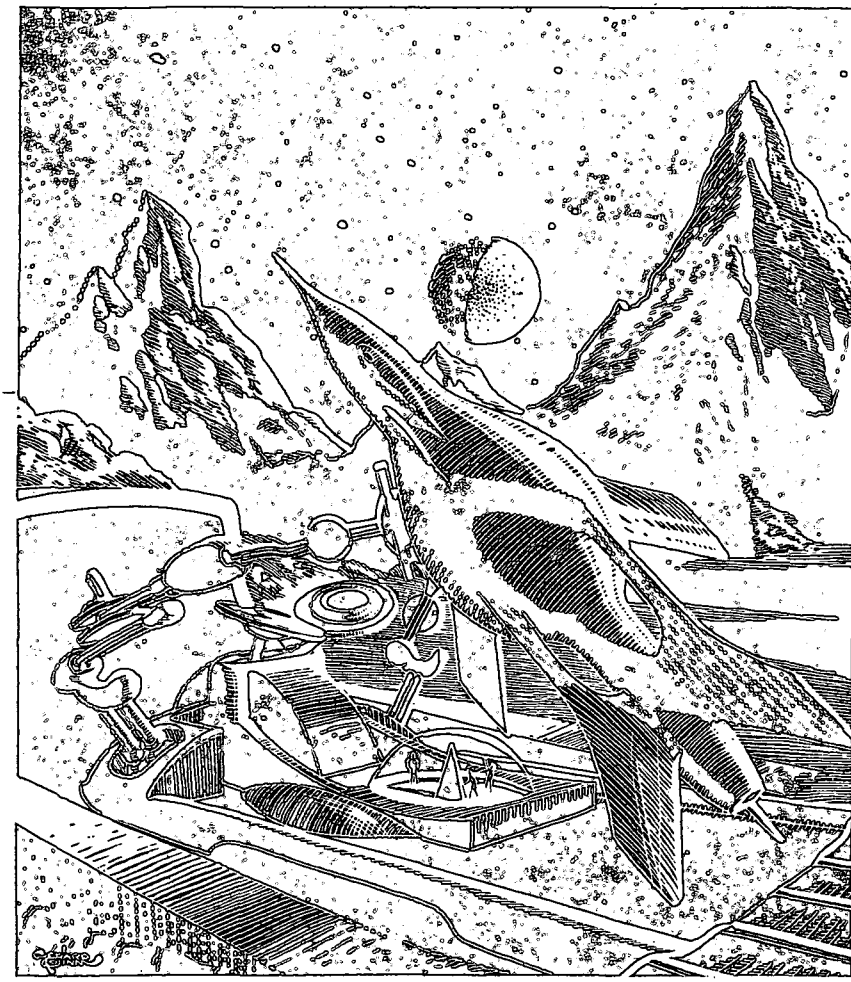

it had a living thing aboard it. Relationship between the two could be any of half a dozen different possibilities and was not necessarily the most obvious or the most lurid. Quinton felt a tight smile broaden his lips; there'd be a fight or two between rival theorists before the affair was safely filed in one of those buff folders in his office.

As the hours passed three more ships landed on the tongue of rock

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projecting out into the pumice-dust sea, each bringing with them more of Quinton's staff. As they arrived Quinton summarised the accumulated information on the beast and the ship for them, sent them up to view the ship and the alien, told them to take any samples they needed and report any theories to him. Eventually twenty members of his staff were housed in the ships dotted about on the projecting rock; the largest number he would permit himself to take off the accumulated projects at Lunapolis, all gathering pieces of a jigsaw puzzle, the final solution of which was unknown.

In the days which followed Quinton hardly left the ship which he had made his headquarters. Almost hourly fresh reports reached his desk in the room he had requisitioned for his office aboard Berg's ship, reports not only of work on the alien ship but also of the projects still in operation in and around Lunapolis. One evening, with a desk clear of unread items, he leaned back in his chair and tried to fit together some of the pieces of information his teams had gained from the ship. Mostly the information was negative.

There was no answer as to the origin of the ship; it could have come from anywhere. The metal of which it was composed had given the metallurgists an awful headache which still endured. Pieces of the metal were en route for Earth. The monster had disappeared and returned three more times but shown no sign of intelligence or taken any interest in the objects dangled on the end of wires into the room where it lay.

Once the disappearance had been witnessed; the man who saw it likened it to water running slowly out of a handbasin, even down to the final eddy. Then the metal wires which ran, fibre-like, through the metal around the chamber where the beast was; they were common only to that part of the ship and encased the room in a wide-mesh net of fine something-or-other alloy. The whole ship was a store-house of knowledge which, if Man's own knowledge and research techniques were sufficiently advanced, would provide him with the first few technological stepping stones to the stars.

Quinton had hardly realised he was day-dreaming; the sharp buzz of the intercom reminded him that most of the problems the ship presented hadn't even been discovered, let alone solved. He felt a smile twist his lips as he flicked up the intercom switch.

"Quinton here."

" Berg here. Quinton, one of the electricians has been playing with that wire mesh surrounding the alien's room. He's traced the connections to a small generator—or what he thinks is a generator. He'd like your permission to pipe a few volts through it for test purposes. . . ."

" Where are you speaking from? "

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" The alien vessel. . . ."

" I'll come up there straight away. Do you want any other gear? "

Berg hesitated a second or two before replying.

" No. The beast is there, by the way."

" Don't do anything until I get there. I'd like to hear what the electrician's got to say."

Berg acknowledged his instructions slowly, resentment at Quinton's orders showing plainly, despite an attempt to conceal it, in his reluctant acquiescence and abrupt switch-off. Quinton scribbled a note on his jotter and donned a spacesuit, mentally calculating that there were only another eighty hours to sunrise. Eighty hours in which to work in comparative comfort . . .

The experience of many people passing between the ships at the foot of the mountain and the alien vessel several hundred feet above the pumice sea had produced an easier way through the ragged, razor-sharp rocks. Conversation, blurred and harsh against an ever-present background wash of static, rattled into Quinton's ears as he climbed upwards.

A rack of arclights had been erected near the wrecked vessel, flooding the ragged ground with a harsh, white light and throwing off highlights of silver from the hull of the wrecked vessel. A single weak bulb glowed inside the fracture in the hull; Quinton climbed aboard and walked along the narrow corridor.

" Are you near the alien, Berg? " he asked.

" Yes. You're in the vessel? "

" Yes. Is Val there? "

" She is. So's Rees."

Quinton nodded to himself in satisfaction. 'Pop' Rees was a good man and any decision he made would have something over thirty years experience of playing with electricity behind it. If 'Pop' reckoned he had worked out something about the wire mesh he probably had a good many answers.

" What have you done, Pop? " asked Quinton, hand outstretched and fingertips touching the wall to guide him.

" Traced the junction of the mesh circuits to something that's sealed. Berg had widened his original peepholes, so I've connected up the broken wires to complete the circuits and permit us to pass current. I've tested it for continuity and it seems all right . . ."

A glow of light ahead allowed Quinton to quicken his pace; three spacesuited figures, over-sized because of the poor illumination and cramped conditions, turned their heads as he interrupted Rees' words.

" Hello, everyone. How's the alien? "

" Still there," replied Val. She moved away from the peephole, now over a foot square, to allow Quinton to look into the cube. He felt her hand, metal-gloved, squeeze his for a second and returned her gesture.

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He might have been looking at the chamber and the alien for the first time; the appearance of the alien in its metal room was identical. Just a pool of black, greasy fluid, immobile ink in a corner of a tilted bottle.

"You think you can pass current through the mesh, Pop?" asked Quinton, not removing his head from the peephole. A few strands of wire joined broken connections.

"I'm certain it'll take more than I'm prepared to give it at present. Besides, the links I've put in will blow if there's too much power. . . ."

"I think the way you're going about the matter is crude. . . ." protested Berg.

Pop chuckled.

"I'm not testing a radio-set; just sending current along a wire. . . ." He glanced at the little switchboard on his wrist.

"Switch on, Pop," instructed Quinton, "and increase power slowly."

A little red light glowed on the small switchboard strapped to Pop's wrist; alongside it, illuminated from beneath, glowed a dial over which a red-tipped pointer moved slowly from left to right as Pop gently turned up the power.

Berg took over Quinton's place at the peephole as Quinton moved alongside Pop. Quinton looked up as he heard Berg's gasp of astonishment.

"Quinton—the beast is doing something it's never done before. It's floating, growing smaller and rotating. It's . . . it's . . . It's hardly more than six inches in diameter, yet . . ."

"Turn off that current . . ." shouted Quinton.

Before Pop had a chance to obey his orders a dazzling flash of light, many times brighter than a thermite flare, exploded out of the cube, dazzling Quinton. Automatically he threw up his hands to protect his eyes from the glare, a shrill scream of terror from Berg shrieking into his ears, echoed by a gasp from Val.

Desperately Quinton tried to blink away the blindness, blindness caused by the flash.

"You all right, Val?" he asked.

"Yes, but . . ."

"I don't know the answers to any how's or why's. Pop, Berg, are you both O.K.?"

The silence in reply to his question chilled Quinton. He asked again, staring anxiously around with slowly returning sight. The dimly glowing lamp still lay on the floor, but the one on the stand which had illuminated the chamber lay extinguished amid the wreckage of its support, across Berg's still body. Slowly Quinton dropped to his knees beside Berg. Beneath his helmet the geologist's face was contorted; streamers of sweat

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trickled off his yellow cheeks and his lips moved rapidly without forming intelligible words. Suddenly Quinton realised he could hear no sound of Berg's voice, yet his rapid breathing was plainly audible.

Quinton rose to his feet.

" How do you feel, Val? " he asked.

" Not too brilliant. I—I think Pop's dead. . . ."

" What! Go to the entrance and send in some people to get Pop and Berg down to the ships."

" Right, Steve," she whispered.

Quinton watched her until her space-suited figure disappeared out of sight before he started to examine Pop. Val's guess had been correct; Pop was dead, fried by a backlash of current which had practically charred him to a cinder. Quinton rose to his feet, sickened, and looked at the generator which had supplied Pop's power, feeling a chill trickle of fear run along his spine when he realised the generator couldn't have produced sufficient kick to kill a man. That meant there had been some effect produced by the mesh which Pop hadn't foreseen.

Quinton bent down and picked up the remaining lamp, thankful that it contained its own power source, and walked to the peephole. Pop's connections, little thicker in the first place than cobwebs, had melted to nothingness; inside the cube lay the alien, undeniably dead.

Quinton couldn't explain to himself how he knew it no longer lived; previously there must have been some subtle quality, apart from the ripple on the oily surface which, when it was alive, told an onlooker that life was present in the body. Now it still looked as greasy, as much like ink in the corner of a tilted bottle, but—it was dead.

A little, sick feeling in the pit of his stomach, Quinton turned away from the peephole and walked to Pop's body. He placed the lamp on the floor and hauled Pop on to his shoulders, picked up the lamp and made for the entrance. The solitary light, when it appeared in his range of vision, silhouetted two figures approaching him.

" Berg's back there," he told them. " Treat him gently; he looks as though he's suffering badly from shock."

The men acknowledged his instructions and walked on, Quinton stepping out of the fracture in the hull in time to see a solo vessel, almost standing on its tail, flash up from the ragged ground on an orange plume of flame.

" Who's that? " he asked.

" Val," answered a voice. " She collapsed when she got out of the ship, so Morgan's taking her down to our ships straight away."

" I see." Quinton lowered Pop's form to the ground.

" Pop's dead. Bring him back with you when the others come out of

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the alien ship. Take Berg down below in the other solo job and tell everybody you see, just in case they don't hear me over this local radio, that they are to return to our ships immediately."

Three or four voices answered his instructions as he started to make his way down the rocky path. Suddenly he realised what Pop's death would mean; the endless reports he would have to make about the matter were a minor concern. What was really important was Pop himself; he'd been twelve years on the Moon, knew everybody, liked everybody and, moreover, was liked by almost everybody. Now he wouldn't play the battered accordion he owned any more, nor would he come along with his quiet grin and drop something on the table, saying, "Just a little gadget I knocked up to make life a bit easier for you."

Most important, he'd missed something in the mesh which had cost him his life, and Pop hadn't missed very much previously, either in life or electricity

Quinton finished the downward climb eventually and walked, conscious of acute mental and physical fatigue, to his ship. The solo vessels which had brought Berg and Val back rested alongside the larger ship, a dull red glow still apparent around their stern jets. Quinton activated the airlock and entered the ship, removing his helmet as he walked along to his little cubby-hole of an office. Placing his helmet on the table he removed his armoured gloves and put them alongside it, then riffled through the half-a-dozen typed sheets of paper which had accumulated during his short absence.

He left the room and looked into each of the other compartments until he found the one in which Berg had been placed; two men, one of them with a hypodermic in his hand, were standing by the bed.

"How is he?" asked Quinton.

"Hard to tell. Shock obviously, but there doesn't appear to be any broken bones. He keeps moving his mouth as though he's talking but we can't hear a sound."

Quinton nodded and approached the bed. Berg, his round, yellow face sunken and jaundiced, eyes closed and lips moving rapidly, lay between white sheets; beneath them his legs and arms lay still.

Suddenly the lips stopped their rapid movement; Quinton beckoned forward the man with the hypodermic. Berg's eyes opened slowly, blinking once or twice and staring for a long second at Quinton.

"How do you feel, Berg?" he asked.

The geologist's face twisted into a smile.

"Quite—well, thanks," he replied slowly.

"Well enough to tell us what happened?"

"Quite well enough for that."

Berg's eyes flickered between the three people watching him. A ghost of a smile parted his lips.

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The smile broadened; unconsciously Quinton retreated a pace, forcing back a scream which rose unbidden in his throat. A gasp from one of the men behind him assured Quinton his eyes were not playing tricks with him. Slowly, broad smile on his lips, Berg sank through the bed, the clothes collapsing into formless wrinkles where his body had previously shaped them.

Breathing heavily, prickles of fear rising on his skin, Quinton asked softly,

"You both saw that?"

The question was unnecessary; both men gazed at him, faces white and lips trembling. They nodded.

Quinton forced himself to the empty bed; forced his reluctant fingers to prod the space where Berg had laid. The sheets were warm to the touch; gaining confidence Quinton ripped off the top sheet, probing at the undersheet and feeling only the soft sponge-rubber mattress beneath it. He chuckled softly to himself and bent down to look underneath the bed, calling himself a fool for even thinking Berg might be on the deck. The geologist wasn't; he'd vanished, literally before the eyes of three watchers, through what most people would consider a solid object.

Quinton straightened up.

"Where's Val?" he asked.

"Next door."

"Thanks. And—don't mention this to anyone. We saw it happen, but some of the others won't be all that ready to believe it. Leave the room now and lock the door behind you, not that it will make much difference if Berg has managed to project himself through solid objects."

Quinton walked into Val's room; she sat in a comfortable chair, a few books and an empty glass on the little table beside her.

"Hello, Steve," she said, a tired smile parting her lips. "Sorry I went out like that. . . ."

Quinton bent his head and kissed her lips, breaking off her words. For a second or two she responded warmly, then broke away.

"One man killed and it upsets me like that . . ."

"The suddenness of it upset me, too," admitted Quinton, "especially as it was Pop. . . ."

"How's Berg?" she interrupted.

Quinton was uncertain whether or not to tell her about the geologist: she'd had a double shock only a short while previously and another, coming so soon after it, might not be the best thing for her. He found himself looking into her eyes, quiet and brown, his vision taking in her features, her short red hair and the little smile on her lips which quietly framed the words,

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" Well? I'm waiting."

Quietly, playing down events, he told her how Berg had vanished before his eyes.

She eased herself in her chair and shivered as Quinton finished speaking.

" In fact he vanished just about the way the alien vanished . . ." She broke off, a shrill little laugh issuing from her throat. " Steve, the alien's got into Berg somehow. . . ." She laughed again, stopping suddenly as Quinton grabbed her wrist and pressed it cruelly with his fingers.

" Sorry, Steve, I'm not exactly on top of the world at present. . . ."

" I know. I just wanted confirmation you thought the same way about Berg as I did. . . ."

" What would be the alien's aim? "

" I couldn't say. It might not even have an aim we can understand. Whatever it's nature it's got a tremendous amount of knowledge and, from it's action in taking over Berg the way it did, I don't think it can be considered friendly. . . ."

" Then Berg's got to be," she paused and swallowed heavily, " killed? "

" Yes."

Quinton walked to the other end of the room.

" I've not been able to think about the matter much, but if an alien pirates a man's body, we have to dispose of the alien, somehow. I don't think we shall manage to get rid of the alien without killing Berg, so . . ."

" You're taking a big responsibility, Steve."

" I know. Technically my crime will be murder, but the only way to fight an inimical something which can flit through walls is to kill it at the first opportunity. You couldn't capture it and confine it to a room . . ."

" You could gas it, or dope it," suggested Val.

" First catch it," replied Quinton grimly.

" How? "

" I wish I knew. Whatever happens Berg *must* be prevented from getting to Earth; there's no telling what damage . . ."

" Steve, look out! " screamed Val. " It's Berg! He . . ."

Quinton darted away from the wall, turning to face the featureless metal against which he had been leaning.

Two feet away from where he stood Berg leaned against the wall, the same broad smile still on his lips.

" Congratulations to the pair of you. You've been making some good guesses ever since you discovered the alien ship. My ship, really, I suppose. . . . I am what you called ' the alien ' in Berg's body; his consciousness is not dead, merely subordinated to mine. . . ."

" Where do you come from? " demanded Quinton, closing up to Val. He felt her hand slip into his.

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"I couldn't say in relation to your world until I've studied the stars. I'm a creature of force; just the same as matter is constantly being created in the Universe, so occasionally a creature, like myself, comes into being in dormant, spore form as a result of Cosmic forces acting upon each other. A race of people captured me when I took over the body of one of their number and bottled me up in the spaceship, directing the ship to fall into a sun, somewhere. Their calculations were at fault, so I'm still alive—and in a better body than the other one. It's got different senses, though; I could—perceive—in the other body; in this one sight and hearing are separate operations and rather confusing at present; besides I haven't discovered the limitations of this body. . . ."

"What do you intend to do?" interrupted Quinton.

"I don't think you'd understand," stated Berg. Privately Quinton agreed; he said,

"How do you——walk through walls?"

"By realigning the molecules of the body structure to pass through the molecules of the structure of the metal."

"I thought that would be the way . . ."

"Just like this," grinned Berg, and faded through the wall.

Quinton waited ten seconds which seemed like an eternity before speaking.

"I think he's gone for the time being. . . ."

"How are we going to get him, Steve?" demanded Val. "If he's dangerous. . . ."

"He's dangerous, right enough. Listen, some race—that corpse up there in the ship belonged to a member of it—caught this alien and confined it in the spaceship so it couldn't escape. That means it was inimical to them and," Quinton felt his voice rising with excitement, "it also meant that the generator and that wire mesh created forces which kept it in that metal room. That's why there were no entrances or exits. There weren't meant to be."

"Then when the ship crashed, or got out of control, the generator stopped and the beast could wander about as it liked, but it always returned to the same spot—why not; it was as good as any. Also the force-creature is a parasite; it lived in the alien's body and when something better came along, Berg in this case, it shifted over, probably frightened by the thought that, as we had started pushing current through the mesh, we might have realised its nature and intended to confine it in the room again."

He paused.

"Berg certainly was right in saying this thing was bottled up in the way Solomon bottled up the djinni; the case is identical. . . ."

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"Steve, you've done a lot of theorising which sounds all right at first hearing, but don't start off on fairy tales," interrupted Val.

"Val, you know what we're going to do now?" grinned Quinton. "We're going to settle that thing, and it's going to commit suicide for us very obligingly."

He grabbed her hand and pulled her out of the chair, leading her into the corridor.

"Get all the men aboard this ship into the control room and tell them to bring guns with them. The thing may be able to realign its molecules to go through a wall but it won't be able to realign them to a bullet."

"You said it was going to commit suicide . . ."

"It is. It won't know we're only driving it into a corner."

Within five minutes Quinton discovered there were seven people aboard the vessel, including himself and Val. Quietly he explained the history to them; three of them only were total strangers to the story. He and Val knew all the details; two of the remaining five had been in the room with Quinton when Berg first disappeared.

"Remember," cautioned Quinton, "when you see Berg, fire to miss; we just want to drive him into the airlock."

Within three minutes they spotted Berg, coming down the corridor towards them. Quinton fired first, the bullet hitting the deck at Berg's feet and whining up between his legs along the corridor. Obligingly Berg vanished through the wall, reappearing still facing them, a few yards further back. Two more shots forced him into the cubbyhole immediately before the airlock; in another second he was inside, behind the closed armoured doors of the airlock.

"So ends the first stage," muttered Quinton.

"What are you doing?" asked Val, frown puckering her forehead.

"For a moment he's safe, and probably knows it. The airlock doors are easily recognisable as being of hard, solid metal. He's got that on all sides of him. Now think of the airlock as a hollow cube; one face of it, the armoured doors, is guarded by us and our guns; of the other five, four are in the vacuum between the double hull and the fifth opens on to the Lunar surface."

Quietly Quinton moved towards the airlock controls and threw over the switches which operated the outer doors, waiting while the big red second hand on the clock above the controls ticked away a quarter of a minute. Resolutely he pulled down the switch to close the outer and open the inner doors.

Breathlessly, guns at the ready, they waited while the airlock closed deliberately and a thin crack appeared between the two inner doors. Ponderously the leaves of heavy metal slid back, revealing Berg's dead

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body, exploded by internal pressure, laying in a welter of its own blood on the floor. Nauseated, Quinton switched the airlock doors to close.

"That's got it," he murmured.

"Yes, but how?" demanded Val, white-faced.

"Just an idea, which I thought so simple it couldn't fail. The alien admitted having trouble trying to co-ordinate sight and sound, when previously he had been the possessor of what could be called 'perception' in place of the two other senses. I also reasoned that in the few hours, through lack of bases upon which to work, he wouldn't have found out an awful lot about the body he'd taken over, especially with the co-ordination trouble. Furthermore, the alien had made Berg's consciousness dormant, so Berg's general knowledge and automatic reactions wouldn't be available to him.

"The kingpin of the whole notion, though," continued Quinton, "was the fact that the original host in which the alien was a parasite could live in a vacuum, couldn't it? Berg was in his space-suit when the creature entered his body, quite safe in a layer of air. Aboard the ship there was an atmosphere, but in the airlock the atmosphere Berg's body needed, but which the original host's did not, was lacking. The alien had to analyse the situation of Berg's body being without air, and alternatively provide some air—perhaps a concept unknown to it—or return to spore form."

Quinton chuckled grimly.

"There wasn't time for it to act, so when Berg's body died, the parasite—died with its host . . ." He sighed, finishing reflectively, "I wonder where it came from, and what else there is waiting for us—out there."

*Peter Hawkins.*

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*This is one of the most delightful fantasies we have published in a long time. It should, by rights be in our companion magazine, but Mr. Sheckley so admirably combines fantasy with science fiction that the story fits either field. Once again we are privileged to publish for the first time in magazine form a story by an outstanding American author.*

# THE ODOUR OF THOUGHT

## By Robert Sheckley

Leroy Cleevy's real trouble started when he was taking Mailship 243 through the uncolonized Seergon Cluster. Before this, he had the usual problems of an interstellar mailman; an old ship, scored tubes, and faulty astrogation. But now, while he was taking line-of-direction readings, he noticed that his ship was growing uncomfortably warm.

He sighed unhappily, switched on the refrigeration, and contacted the Postmaster at Base. He was at the extreme limit of radio contact, and the Postmaster's voice floated in on a sea of static.

"More trouble, Cleevy?" the Postmaster asked, in the ominous voice of a man who writes schedules and believes in them.

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" Oh, I don't know," Cleevy said brightly. " Aside from the tubes and astrogation and wiring, everything's fine except for the insulation and refrigeration."

" It's a damned shame," the Postmaster said, suddenly sympathetic. " I know how you feel."

Cleevy switched the refrigeration to FULL, wiped perspiration from his eyes, and decided that the Postmaster only *thought* he knew how he felt.

" Haven't I asked the government for new ships over and over again?" The Postmaster laughed ruefully. " They seem to feel that I can get the mail through in any old crate."

At the moment, Cleevy wasn't interested in the Postmaster's troubles. Even with the refrigeration labouring at FULL, the ship was overheating.

" Hang on a moment," he said. He went to the rear of the ship, where the heat seemed to be emanating, and found that three of his tanks were filled, not with fuel, but with a bubbling white-hot slag. The fourth tank was rapidly undergoing the same change.

Cleevy stared for a moment, turned, and sprinted to the radio.

" No more fuel," he said, " Catalytic action, I think. I *told* you we needed new tanks. I'm putting down on the first oxygen planet I can find."

He pulled down the Emergency Manual and looked up the Seergon Cluster. There were no colonies in the group, but the oxygen worlds had been charted for future reference. What was on them, aside from oxygen, no one knew. Cleevy expected to find out, if his ship stayed together long enough.

" I'll try 3-M-22," he shouted over the mounting static.

" Take good care of the mail," the Postmaster howled back. " I'm sending a ship right out."

Cleevy told him what he could do with the mail, all twenty pounds of it. But the Postmaster had signed off by then.

Cleevy made a good landing on 3-M-22; exceptionally good, taking into consideration the fact that his instruments were too hot to touch, his tubes were warped by heat, and the mail sack strapped to his back hampered his movements. Mailship 243 sailed in like a swan. Twenty feet above the planet's surface it gave up and dropped like a stone.

Cleevy held on to consciousness, although he was certain every bone in his body was broken. The sides of the ship were turning a dull red when he stumbled through the escape hatch, the mail sack still firmly strapped to his back. He staggered one hundred yards, eyes

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closed. Then the ship exploded, and knocked him flat on his face. He stood up, took two more steps, and passed out completely.

When he recovered consciousness, he was lying on a little hillside, face down in tall grass. He was in a beautiful state of shock. He felt that he was detached from his body, a pure intellect floating in the air. All worries, emotions, fears, remained with his body; he was free.

He looked around, and saw that a small animal was passing near him. It was about the size of a squirrel, but with dull green fur.

As it came close, he saw that it had no eyes or ears.

This didn't surprise him. On the contrary, it seemed quite fitting. Why in hell should a squirrel have eyes or ears? Squirrels were better off not seeing the pain and torture of the world, not hearing the anguished screams of . . .

Another animal approached, and this one was the size and shape of a timber wolf, but also coloured green. Parallel evolution? It didn't matter in the total scheme of things, he decided. This one, too, was eyeless and earless. But it had a magnificent set of teeth.

Cleevy watched with only faint interest. What does a pure intellect care for wolves and squirrels, eyeless or otherwise? He observed that the squirrel had frozen, not more than five feet from the wolf. The wolf approached slowly. Then, not three feet away, he seemed to lose the scent. He shook his head and turned a slow circle. When he moved forward again, he wasn't going in the right direction.

The blind hunt the blind, Cleevy told himself, and it seemed a deep and eternal truth. As he watched, the squirrel quivered; the wolf whirled, pounced, and devoured it in three gulps.

What large teeth wolves have, Cleevy thought. Instantly the eyeless wolf whirled and faced him.

Now he's going to eat me, Cleevy thought. It amused him to realize that he was the first human to be eaten on this planet.

The wolf was snarling in his face when Cleevy passed out again.

It was evening when he recovered. Long shadows had formed over the land, and the sun was low in the sky. Cleevy sat up and flexed his arms and legs experimentally. Nothing was broken.

He got up on one knee, groggy, but in possession of his senses. What had happened? He remembered the crash as though it were a thousand years ago. The ship had burned, he had walked away and fainted. After that he had met a wolf and a squirrel.

He climbed unsteadily to his feet and looked around. He must have dreamed that last part. If there had been a wolf, he would have been killed.

Glancing down at his feet, he saw the squirrel's green tail, and a little further away, its head.

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He tried desperately to think. So there *had* been a wolf, and a hungry one. If he expected to survive until the rescue ship came, he had to find out exactly what had happened, and why.

Neither animal had eyes or ears. How did they track each other? Smell? If so, why did the wolf have so much trouble finding the squirrel

He heard a low growl, and turned. There, not fifty feet away, was something that looked like a panther. A yellow-brown, eyeless, earless panther.

Damned menagerie, Cleevy thought, and crouched down in the tall grass. This planet was rushing him along too fast. He needed time to think. How did these animals operate? Instead of sight, did they have a sense of location?

The panther began to move away.

Cleevy breathed a little easier. Perhaps, if he stayed out of sight, the panther . . .

As soon as he thought the word *panther*, the beast turned in his direction.

What have I done, Cleevy asked himself, burrowing deeper into the grass. He can't smell me or see me or hear me. All I did was decide to stay out of his way . . . .

Head high, the panther began to pace toward him.

That did it. Without eyes or ears there was only one way the beast could have detected him.

It had to be telepathic !

To test this theory, he thought the word *panther*, identifying it automatically with the animal that was approaching him. The panther roared furiously, and shortened the distance between them.

In a fraction of a second, Cleevy understood a lot of things. The wolf had been tracking the squirrel by telepathy. The squirrel had frozen—perhaps it had even stopped thinking ! The wolf had been thrown off the scent—until the squirrel wasn't able to keep from thinking any longer.

In that case, why hadn't the wolf attacked him while he was unconscious? Perhaps he had stopped thinking—or at least, stopped thinking on a wave length that the wolf could receive. Probably there was more to it than that.

Right now, his problem was the *panther*.

The beast roared again. It was only thirty feet away, and closing the distance rapidly.

All he had to do, Cleevy thought, was not to think of—was to think of something else. In that way, perhaps the—well, perhaps it would lose the scent. He started to think about all the girls he had ever known, in painstaking detail.

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The panther stopped and pawed the ground doubtfully.

Cleevy went on thinking; about girls, and ships, and planets, and girls, and ships, and everything but panthers . . .

The panther advanced another five feet.

Damn it, he thought, how do you *not* think of something? You think furiously about stones and rocks and people and places and things, but your mind always returns to—but you ignore that, and concentrate on your sainted grandmother, your drunken old father, the bruises on your right leg (count them. Eight. Count them again. Still eight). And now you glance up, casually, seeing, but not really recognizing the—anyhow it's still advancing.

Cleevy found that trying *not* to think of something is like trying to stop an avalanche with your bare hands. He realized that the human mind couldn't be inhibited as directly and consciously as all that. It takes time, and practice.

He had about fifteen feet left in which to learn how not to think of a . . .

Well, there are also card games to think about, and parties, and dogs, cats, horses, mice, sheep, wolves (move away!) and bruises, battleships, caves, lairs, dens, cubs (watch out), p-*paramounts*, and tantamounts and gadabouts and roundabouts and roustabouts and ins-and-outs (about eight feet) meals, food, fire, fox, fur, pigs, pokes, prams and p-p-p-p . . .

The panther was about five feet away now, and crouching for the spring. Cleevy couldn't hold back the thought any longer. Then, in a burst of inspiration, he thought:

Pantheress!

The panther, still crouching, faced him doubtfully.

Cleevy concentrated on the idea of a pantheress. *He* was a pantheress and what did this panther mean by frightening her that way? He thought about his (her, damn it!) cubs, a warm cave, the pleasure of tracking down squirrels.

The panther advanced slowly and rubbed against Cleevy. Cleevy thought desperately, what fine weather we've been having, and what a fine panther this chap really is, so big, so strong, and with such enormous teeth.

The panther purred!

Cleevy lay down and curled an imaginary tail around him, and decided he was going to sleep. The panther stood by indecisively. He seemed to feel that something was wrong. He growled once, deep in his throat, then turned and loped away.

The sun had just set, and the entire land was a deep blue. Cleevy found that he was shaking uncontrollably, and on the verge of hysterical

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laughter. If the panther had stayed another moment . . .

He controlled himself with an effort. It was time for some serious thinking.

Probably every animal had its characteristic thought-smell. A squirrel emitted one kind, a wolf another, and a human still another. The all-important question was, could he be traced only when he thought of some animal? Or could his thought-pattern, like an odour, be detected even when he was not thinking of anything in particular?

Apparently, the panther had scented him only when he thought specifically of it. But that could be due to unfamiliarity. His alien thought-smell might have confused the panther—this time.

He'd just have to wait and see. The panther probably wasn't stupid. It was just the first time that trick had been played on him.

Any trick will work—once.

Cleevy lay back and stared at the sky. He was too tired to move, and his bruised body ached. What would happen now, at night? Did the beasts continue to hunt? Or was there a truce of some sort? He didn't give a damn.

To hell with squirrels, wolves, panthers, lions, tigers, and reindeer.

He slept.

The next morning, he was surprised to find himself still alive. So far, so good. It might be a good day after all. Cheerfully he walked to his ship.

All that was left of Mailship 243 was a pile of twisted metal strewn across the scorched earth. Cleevy found a bar of metal, hefted it, and slid it into his belt below the mail sack. It wasn't much of a weapon, but it gave him a certain confidence.

The ship was a total loss. He left, and began to look for food. In the surrounding countryside there were several fruit-bearing shrubs. He sampled one warily, and found it tart but not unpleasant. He gorged himself on fruit, and washed it down with water from a nearby stream.

He hadn't seen any animals, so far. Of course, for all he knew, they could be closing in on him now.

He avoided the thought and started looking for a place to hide. His best bet was to stay out of sight until the rescue ship came. He tramped over the gentle rolling hills, looking for a cliff, a tree, a cave. But the amiable landscape presented nothing larger than a six-foot shrub.

By afternoon he was tired and irritated, and scanning the skies anxiously. Why wasn't the ship here? It should take no longer than a day or two, he estimated, for a fast emergency ship to reach him.

If the Postmaster was looking on the right planet.

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There was a movement in the sky. He looked up, his heart racing furiously. There was something there !

It was a bird. It sailed slowly over him, balancing easily on its gigantic wings. It dipped once, then flew on.

It looked amazingly like a vulture.

He continued walking. In another moment, he found himself face to face with four blind wolves.

That took care of one question. He *could* be traced by his characteristic thought-smell. Evidently the beasts of this planet had decided he wasn't too alien to eat.

The wolves moved cautiously toward him. Cleevy tried the trick he had used the other day. Lifting the metal bar out of his belt, he thought of himself as a female wolf searching for her cubs. Won't one of you gentlemen help me find them? They were here only a few minutes ago. One was green, one was spotted, and the other . . .

Perhaps these wolves didn't have spotted cubs. One of them leaped at Cleevy. Cleevy struck him in mid-air with his bar, and the wolf staggered back.

Shoulder to shoulder, the four closed in.

Desperately Cleevy tried to think himself out of existence. No use. The wolves kept on coming.

Cleevy thought of a panther, *He* was a panther, a big one, and he was looking forward to a meal of wolf.

That stopped them. They switched their tails anxiously, but held their ground.

Cleevy growled, pawed the earth and stalked forward. The wolves retreated, but one started to slip in behind him.

He moved sideways, trying to keep from being circled. It seemed that they really didn't believe him. Perhaps he didn't make a good panther. They had stopped retreating. One was behind him, and the others stood firm, their tongues lolling out on their wet, open jaws. Cleevy growled ferociously, and swung his club. A wolf darted back, but the one behind him sprang, landed on the mail sack, and knocked him over.

As they piled on, Cleevy had another inspiration. He imagined himself to be a snake, very fast, deadly, with poison fangs that could take a wolf's life in an instant.

They were off him at once. Cleevy hissed, and arched his boneless neck. The wolves howled angrily, but showed no inclination to attack.

Then Cleevy made a mistake. He knew that he should stand firm and brazen it out. But his body had its own ideas. Involuntarily he turned and sprinted away.

The wolves loped after him, and glancing up, Cleevy could see the

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vultures gathering for the remains. He controlled himself and tried to become a snake again, but the wolves kept coming.

The vultures overhead gave him an idea. As a spaceman he knew what the land looked like from the air. Cleevy decided to become a bird. He imagined himself soaring, balanced easily on an updraft, looking down on the green rolling land.

The wolves were confused. They ran in circles, and leaped into the air. Cleevy continued soaring, higher and higher, backing away slowly as he did so.

Finally he was out of sight of the wolves, and it was evening. He was exhausted. He had lived through another day. But evidently his gambits were good only once. What was he going to do tomorrow, if the rescue ship didn't come?

After it grew dark, he lay awake for a long time, watching the sky. But all he saw were stars. And all he heard was the occasional growl of a wolf, or the roar of a panther dreaming of his breakfast.

Morning came too soon. Cleevy awoke still tired and unrefreshed. He lay back and waited for something to happen.

Where was the rescue ship? They had had plenty of time, he decided. Why weren't they here? If they waited too long, the panther . . .

He shouldn't have thought it. In answer, he heard a roar on his right.

He stood up and moved away from the sound. He decided he'd be better off facing the wolves . . .

He shouldn't have thought that either, because now the roar of the panther was joined by the howl of a wolf pack.

Cleevy met them simultaneously. A green-yellow panther stepped daintily out of the underbrush in front of him. On the other side, he could make out the shapes of several wolves. For a moment, he thought they might fight it out. If the wolves jumped the panther, he could get away . . .

But they were interested only in him. Why should they fight each other, he realized, when he was around, broadcasting his fears and helplessness for all to hear?

The panther moved toward him. The wolves stayed back, evidently content to take the remains. Cleevy tried the bird routine, but the panther, after hesitating a moment, kept on coming.

Cleevy backed toward the wolves, wishing he had something to climb. What he needed was a cliff, or even a decent-sized tree . . .

But there were shrubs! With inventiveness born of desperation, Cleevy became a six-foot shrub. He didn't really know how a shrub would think, but he did his best.

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He was blossoming now. And one of his roots felt a little wobbly. The result of that last storm. Still, he was a pretty good shrub, taking everything into consideration.

Out of the corner of his branches, he saw the wolves stop moving. The panther circled him, sniffed, and cocked his head to one side.

Really now, he thought, who would want to take a bite out of a shrub. You may have thought I was something else, but actually, I'm just a shrub. You wouldn't want a mouthful of leaves, would you? And you might break a tooth on my branches. Who ever heard of panthers eating shrubs? And I *am* a shrub. Ask my mother. She was a shrub, too. We've all been shrubs, ever since the Carboniferous Age.

The panther showed no signs of attacking. But he showed no signs of leaving either. Cleevy wondered if he could keep it up. What should he think about next? The beauties of Spring? A nest of robins in his hair?

A little bird landed on his shoulder.

Isn't that nice, Cleevy thought. He thinks I'm a shrub, too. He's going to build a nest in my branches. That's perfectly lovely. All the other shrubs will be jealous of me.

The bird tapped lightly at Cleevy's neck.

Easy, Cleevy thought. Wouldn't want to kill the tree that feeds you.

The bird tapped again, experimentally. Then, setting its webbed feet firmly, proceeded to tap at Cleevy's neck with the speed of a pneumatic hammer.

A damned woodpecker, Cleevy thought, trying to stay shrublike. He noticed that the panther was suddenly restive. But after the bird had punctured his neck for the fifteenth time, Cleevy couldn't help himself. He picked up the bird and threw it at the panther.

The panther snapped, but not in time. Outraged, the bird flew around Cleevy's head, scouting. Then it streaked away for the quieter shrubs.

Instantly, Cleevy became a shrub again, but that game was over. The panther cuffed at him. Cleevy tried to run, stumbled over a wolf, and fell. With the panther growling in his ear, he knew that he was a corpse already.

The panther hesitated.

Cleevy now became a corpse to his melting finger tips. He had been dead for days, weeks. His blood had long since drained away. His flesh stank. All that was left was rot and decay. No sane animal would touch him, no matter how hungry it was.

The panther seemed to agree. He backed away. The wolves howled hungrily, but they too were in retreat.

Cleevy advanced his putrefaction several days. He concentrated on

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how horribly indigestible he was, how genuinely unsavory. And there was conviction in the back of his thought. He honestly didn't believe he would make a good meal for anyone.

The panther continued to move away, followed by the wolves. He was saved ! He could go on being a corpse for the rest of his life, if necessary . . .

And then he smelled *truly* rotten flesh. Looking around, he saw that an enormous bird had landed beside him.

On Earth, it would have been called a vulture.

Cleevy could have cried at that moment. Wouldn't anything work? The vulture waddled toward him, and Cleevy jumped to his feet and kicked it away. If he had to be eaten, it wasn't going to be by a vulture.

The panther came back like a lightning bolt, and there seemed to be anger and frustration on that blank, furry face. Cleevy raised his metal bar, wishing he had a tree to climb, a gun to shoot, or even a torch to wave . . .

A torch !

He knew at once that he had found the answer. He blazed in the panther's face, and the panther backed away, squealing. Quickly Cleevy began to burn in all directions, devouring the dry grass, setting fire to the shrubs.

The panther and the wolves darted away.

Now it was his turn ! He should have remembered that all animals have a deep, instinctive dread of fire. By God, he was going to be the greatest fire that ever hit this place !

A light breeze came up and fanned him across the rolling land. Squirrels fled from the underbrush and streaked away from him. Families of birds took flight, and panthers, wolves and other animals ran side by side, all thought of food driven from their minds, wishing only to escape from the fire—to escape from him !

Dimly, Cleevy realized that he had now become truly telepathic himself. Eyes closed, he could see on all sides of him, and sense what was going on. As a roaring fire he advanced, sweeping everything before him. And he could *feel* the fear in their minds as they raced away.

It was fitting. Hadn't man always been the master, due to his adaptability, his superior intelligence? The same results obtained here, too. Proudly he jumped a narrow stream three miles away, ignited a clump of bushes, flamed, spurted . . .

And then he felt the first drop of water.

He burned on, but the drop became five, then fifteen then five

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hundred. He was drenched, and his fuel, the grass and shrubs, were soon dripping with water.

He was being put out.

It just wasn't fair, Cleevy thought. By rights he should have won. He had met this planet on its own terms, and beaten it—only to have an act of nature ruin everything.

Cautiously the animals were starting to return.

The water poured down. The last of Cleevy's flames went out. Cleevy sighed, and fainted.

". . . . a damned fine job. You held on to your mail, and that's the mark of a good postman. Perhaps we can arrange a medal."

Cleevy opened his eyes. The Postmaster was standing over him, beaming proudly. He was lying on a bunk, and overhead he could see curving metal walls.

He was on the rescue ship.

"What happened?" he croaked.

"We got you just in time," the Postmaster said. "You'd better not move yet. We were almost too late."

Cleevy felt the ship lift, and knew that they were leaving the surface of 3-M-22. He staggered to the port, and looked at the green land below him.

"It was close," the Postmaster said, standing beside Cleevy and looking down. "We got the ship's sprinkler system going just in time. You were standing in the centre of the damndest grass fire I've ever seen." Looking down at the unscarred green land, the Postmaster seemed to have a moment of doubt. He looked again, and his expression reminded Cleevy of the panther he had tricked.

"Say—how come you weren't burned?"

*Robert Sheckley.*

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The exhilaration of reading a savage criticism of a book is a rare experience. Unlike the unfortunate film reviewer who is apparently forced to see nearly every film and whose comments become as banal as the subjects themselves (probably out of sheer self-defence as very few have the courage or even the mandate to label an abomination—excepting of course Miss Lejeune), the literary critic has only the time and the space to survey the worthy minority. The mediocre are cast aside and rarely does he take pains to attack a particularly bad book. It is refreshing, therefore, to discover the editorial vitriol poured out in an American amateur science-fiction review. Sam Sackett in his Spring 1954 issue of *Fantastic Worlds* cruelly dissects the startling **Flying Saucers Have Landed** by Desmond Leslie and George Adamski, published here in 1953 by T. Werner Laurie and which quickly found its way to America, the home of sensationalism.

Following the publication of several tentative discourses on flying saucers—an unfortunate description, perhaps, coined by Kenneth Arnold who apparently started the whole thing over Mount Ranier in 1947—this book audaciously presented an account by Mr. Adamski of meeting a man from Venus. This long-haired zoot-suited extra-terrestial had landed in the Arizona desert from a flying saucer which had been spotted by the self-styled astronomer Adamski who operated a refreshment stand near Mount Palomar and philosophically surveyed the heavens through a miniature version of his giant neighbour. With unexpected resource Mr. Adamski had along with him plaster of paris to mould the being's footprints, and witnesses to make sworn affidavits. To go into detail of the encounter would be to succumb to the hoax which some maintain had been perpetrated by Adamski, or, to present another view, to spoil the enjoyment of this startling revelation which concludes a rather tedious and irrational survey of the historical aspects of the flying saucer visitations put together by an obviously sincere Desmond Leslie.

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In all fairness I agree that the most generous reader will baulk at Leslie's facile acceptance of strange references from his often esoteric source material, simply on the principle that, lacking scientific evidence, it is safe to make a certain assumption, whereas, of course, it is equally as safe not to make it. But I feel that a book of this kind should be considered in context, as it were, as part of the general welter of pseudoscientific outpourings on a subject which, after all, may have been magnified into world-shattering importance from purely hallucinatory evidence. Mr. Sackett appears to have taken this book too seriously, or perhaps, having astutely noticed Mr. Leslie's distortions of science and legend for the purposes, he alleges, of making his name and fortune, is annoyed by the possibility of the success of this formula. As a man of some literary endeavours himself, Mr. Sackett must regret his final hope that no one will buy the book, for according to *Publishers' Weekly* the American sales alone are 55,000 copies, while Werner Laurie tells me that the British edition has topped 50,000—these figures excluding of course the Dutch, French, Portugese, Norwegian and Japanese editions !

The fact that the public is willing to sit up and take notice of the possibilities of extra-terrestial life visiting this planet must be particularly satisfying to the science-fiction enthusiast, whose very nature insists on this thrilling possibility becoming true. To the cynical observer of human nature, it would seem that this will be the only solution to our world problems whatever dramatic turn of events may develop. Personally, as a mixture of both, I would like to believe, but require conclusive proof—not the kind of purported evidence backed up by unconvincing photographs offered to date.

Neither am I convinced nor impressed by the negative arguments put forward by Dr. Donald Menzel of Harvard University in his ponderous **Flying Saucers** (Putnam, 21/-). Dr. Menzel seeks to prove that the illusion of flying saucers is caused by natural phenomena ranging from meteors to the effects of ionised air at certain altitudes, plus a few man-made articles like high-flying balloons and badly focussed car headlights. I find myself almost in agreement with Desmond Leslie in complaining that not one tenth of all the alleged sightings and other ' observed ' phenomena can be explained away in this manner.

Nevertheless until indisputable proof is available an open, if inquiring, mind is necessary for this subject, and to aid further study of the fascinating mystery, a book just published is recommended as the most comprehensive treatise so far, more controversial even than Gerald Heard's **Riddle Of The Flying Saucers** published by Carroll

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and Nicholson in 1950. This is Harold T. Wilkins' **Flying Saucers On The Moon** (Peter Owen, 16/-) for which the author, as in his classical works on the early South American civilizations, characteristically devoted nine years to research on the subject and has produced a truly interesting book. However, it is hardly " more astounding and incredible than science-fiction " as stated on the jacket. Still less is it a book of " facts." In the manner of the late Charles Fort, Mr. Wilkins has amassed a formidable array of eye-witness reports of unexplained phenomena ranging from the " foo-fighters " of the late war to floating luminous globes and even alleged landings of spaceships and meetings with creatures from other worlds. Most of the wilder reports are presented, I feel, with tongue in cheek, and dogmatic conclusions are not drawn as a general principle, but rather subtly he leads the reader to think that there must, after all, be some foundation of fact behind all this " evidence." He has preferred to ignore Menzel's theories, but disposed of the Adamski episode in a contemptuous paragraph or two. But his own scientific reasoning becomes a little haywire in the crucial chapter wherein he advances his theory that the moon is apparently a stopping off place for the flights of observation to the earth by the alien space ships.

He attacks such " conventional scientific dogmas " as " solar radiant heat waves travelling through the alleged absolute zero temperature of space in which all molecular movement ceases " and proves the impossibility of this by pointing to the vacuum flask principle. Then he proudly advances his own theory that, after all, our sun may emit electro-magnetic wave radiation (an established fact), which is transformed, by some electrical reaction, into heat in the upper regions of our atmosphere ! He also asks how do we *know* that the moon has a rotation corresponding to the diurnal rotation of the earth, so that we see only one half of the moon's surface. But surely the reason for this phenomenon (varied by the libration effect), is because the moon does not rotate on its axis any more? And as for scoffing at our own efforts to travel to the moon because of the lethal effect of cosmic radiation, I doubt if many astronautical experts will agree with Mr. Wilkins' scientist who computes that thirty feet of solid lead all round the space ship will be needed to keep the occupants alive.

Mr. Wilkins is adept throughout the book in quoting some very fantastic theories of the achievements of the weird aeroforms which he is convinced exist—and his sources are varied, and numerous—and attempting to make his point by rhetorical question. Maybe he is right. Perhaps, to take one proposition, they are entities from etheric worlds, transforming themselves into our own three-dmensional form

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of matter on entering the earth's atmosphere, to the accompaniment of multicoloured lights. After considering our own efforts towards space-travel, pitiful by comparison, it would seem that the solemn warning of our imminent danger is timely indeed. Whilst waiting upon the pleasure of our government security censors then, let us hope that it is only the little green men after all. The title of the book, by the way, has been thought to be misleading, and for the reprint now in hand, it will be changed to "Flying Saucers from the Moon."

Developing further this theory of interplanetary visitors is the object of still another new book **Flying Saucers From Outer Space** by Donald E. Keyhoe (Hutchinson, 10/6). Readers may remember that Keyhoe—a retired major of the U.S. Marine Corps and an aeronautical expert—reported the results of his first investigation into the mystery under the title "The Flying Saucers Are Real" back in 1950, castigating the U.S. Air Force for withholding the truth from the public. (In view of the Orson Welles' Martian panic in 1938 I feel they had good reason to, but apparently they are now hoist with their own petard). Since then Major Keyhoe appears to have had the fullest co-operation of the U.S. Air Force, with access to most of the 'top-secret' dossiers and actual photographs of sightings. This book is a record of that association, and the author substantiates his own strong opinions that we are being watched by beings from outer space by revealing a letter to his publishers which must stand as the most amazing official announcement in recorded history. I quote "his (Keyhoe's) long association and co-operation with the Air Force, in our study of unidentified flying objects, qualifies him as a leading authority on this investigation. The Air Force and its investigative agency, Project Bluebook, are aware of Major Keyhoe's conclusion that the flying saucers are from another planet. The Air Force has never denied that this possibility exists. Some of the personnel believe that there may be some natural phenomena completely unknown to us, but that if the apparently controlled manouevres reported by many competent observers are correct, then the only remaining explanation is the interplanetary answer."

Keyhoe reveals the official Air Force attitude to Dr. Menzel's explanations of several problem sightings and encounters, particularly the unfortunate Mantell episode, the first casualty in the interplanetary contact. He debunks the story of the Arizona flying saucer which crashed and spilled out "little metal men from Mars," and ridicules the Adamski meeting with a Venusian. (Actually the "little men" story was not new, as Frank Scully had built this up in his book **Behind The Flying Saucers,** but apparently Scully had been badly

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duped). Keyhoe relies mainly on the numerous reports by experienced pilots, and convincingly makes his point that these strange aeroforms are of extra-terrestrial origin. Further he maintains that the world should be forewarned so that there will be no panic when actual contact is first made.

Lastly, from France, I have received a copy of the first book published there by a French author on flying saucers. This is **Les Soucoupes Volantes Viennent d'un Autre Monde** by Jimmy Guieu (Editions Fleve Noir). M. Guieu is already well-known in France as a science-fiction author, and among other things he is also a member of the Fortean Society, several flying saucer clubs, and is the chief investigator of an international organization called "Ouranos" which is studying the flying saucer phenomena. M. Guieu, obviously, is not a man to pull any punches on his favourite subject, and here we have not only most of the reports now familiar from previous American and English books, but results of enquiries made by "Ouranos" particularly on the Continent and in Africa. This is really an exhaustive survey, in the Wilkins' style; well-written and with, understandably, a science-fiction flavour, and on practically every page M. Guieu punches home his conviction of the existence of flying discs from out of space. The twenty illustrations in the book include some fantastic photographic reconstructions of some of the more important "incidents," and enhance the value of this contribution to the shelf of flying saucer books for the serious student.

An interesting footnote to Keyhoe's assertion that the Comet disaster in India last year was due to a collision with or an attack from a flying saucer, and admitted as such by the Ministry of Civil Aviation, is the prompt Ministry denial in the press that this was the cause. Can it be that our own authorities are putting the security clamps on disquieting facts? Is it possible that concealed beneath the flummery of sensational journalism and unevaluated observations there is undeniable evidence that this planet has been and is being visited by life forms from other worlds?

I ponder again uneasily a favourite science-fiction story of the cosmic alarm-bell which sent its clamour across the universe when we first exploded the atom—"and the sky was full of ships."

*Leslie Flood*

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Dear Editor :

With reference to your editorial " Investigation " in the June issue, I doubt if your suggestion that the decline in the reading of science fiction is due largely to the quantity available or the width of the field. The same point could be applied both to the ' thriller ' and the ' western,' but I am not aware that there is any falling off in quantity in either field.

I am in full agreement with your argument that part of the cause of the decline must be laid at the door of the poorly written rubbish, but there are other non-economic factors. The general decline in reading with the advent of television is an obvious one. Another, for which there seems no cure, is the technical difficulty of the modern, good story. As an example, I might quote a friend—a classics student—who recently picked up a copy of a contemporary magazine and remarked that she could not understand it. Though I am no scientist, I have been reading science fiction long enough to have obtained a working knowledge of its specialised vocabulary, but I fear even many scientists might well be confused.

The other point, I feel, is that the type is taking itself too seriously. After all, we read science fiction for enjoyment. Whether we appreciate good science fiction (and this is indefinable), depends on the level to which our taste in reading has been educated, but to talk of it as a branch of literature is seriously overdoing it. There are a few—a very few—stories which may qualify for permanence, just as there is a handful of detective stories or westerns. But the main reason for reading most fiction is escapism—and science fiction is, after all, escapist. Though we may improve our minds, or begin to think—it is incidental.

The fall-off in science fiction humour is evidence of this situation. There are far too few writers who appreciate that the human race, when being serious, is the biggest cosmic joke of them all.

John H. Wallbridge,
University of Southampton.

(*Despite your assumption, there has been a big drop in the sale of westerns and detective stories, especially novels. Publishers all agree that science fiction books sell better than either of them.—Ed.*)

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